SUNY Cortland Memorial Library
3 0273 00400456 7

MEMORIAL LIBRARY
STATE UNIVERSITY COLLEGE
CORTLAND, NEW YORK 13045

# SCHOOL PROGRAM IN PHYSICAL EDUCATION

BY

CLARK W. HETHERINGTON

*Of the Institute of Educational Research*
*Teachers College, Columbia University*
*Formerly Supervisor of Physical Education*
*State of California*

*Prepared as a subcommittee report to the Commission on Revision of Elementary Education National Education Association*

Yonkers-on-Hudson, New York
WORLD BOOK COMPANY
1922

WORLD BOOK COMPANY

THE HOUSE OF APPLIED KNOWLEDGE

Established 1905 by Caspar W. Hodgson

YONKERS-ON-HUDSON, NEW YORK
2126 PRAIRIE AVENUE, CHICAGO

Notwithstanding the great amount of discussion that physical education in our schools has elicited, it cannot be said that we have had any complete published statement on an American program in the subject. The elements of a program have been evolving gradually; but the program has not been interpreted or described, and its principles have not been formulated. The present report embodies the first attempt to formulate for physical education a school program that is indigenous to America. This program builds on the growth that has been taking place; it interprets that growth; it analyzes present tendencies; and it formulates the principles involved in the organization of a program in physical education to meet the needs of children in their preparation for citizenship. In a strict sense this book applies American knowledge to American needs; and in a larger sense it assuredly meets the requirements of World Book Company's motto for its texts, "Books that apply the world's knowledge to the world's needs"

HSPPE–I

Copyright 1922 by World Book Company
Copyright in Great Britain
*All rights reserved*

PRINTED IN U.S.A

# FOREWORD

THE report of Clark W. Hetherington, herewith submitted, on a proposed "School Program in Physical Education" is very broad in its scope. Beginning with a concise review of the rise of physical education in the public schools, it proceeds to a destructive critical analysis of the attempts that have been made to adapt European methods of physical education to American schools, and thence it passes to a constructive scientific presentation of the problems, objectives, and principles involved in the organization of a school program.

Perhaps the greatest contribution made by the author in this report is to be found in his treatment of the primary aims of physical education. He shows how the big-muscle activities must be organized as an essential and bulky phase of child life, and then how these big-muscle activities must be organized in such ways as to secure their inherent values for the development of the fundamental intellectual, emotional, nervous, and organic powers underlying efficiency in life.

Mr. Hetherington has had much experience and much success both as a teacher and as a supervisor of physical education. His theories, therefore, have been submitted to the test of experiment in school work and on the playground. They are the conclusions derived from long observation and much experimentation as well as from thought and study.

MARGARET S. MCNAUGHT

*Chairman of Committee on Revision of Elementary Education.*

## COMMISSION ON REVISION OF ELEMENTARY EDUCATION, NATIONAL EDUCATION ASSOCIATION

MARGARET S. MCNAUGHT, *Chairman*
State Commissioner of Elementary Schools, Sacramento, California

ELIZABETH ASH WOODWARD, *Secretary*
University of State of New York, Albany, New York

GEORGIA ALEXANDER, Indianapolis, Indiana

RUBYE A. BATTE, Memphis, Tennessee

ABBIE LOUISE DAY, New York City

SARA H. FAHEY, Brooklyn, New York

ANNA LAURA FORCE, Denver, Colorado

THEDA GILDEMEISTER, State Normal School, Winona, Minnesota

FRANCES H. HARDEN, Chicago, Illinois

CLARK W. HETHERINGTON, New York City

OLIVE M. JONES, New York City

ABBY E. LANE, Chicago, Illinois

MARIANNA MARCH, Child Culture School, Memphis, Tennessee

CARROLL GARDNER PEARSE, State Normal School, Milwaukee, Wisconsin

PAYSON SMITH, State Commissioner of Education, Boston, Massachusetts

LIDA LEE TALL, State Normal School, Towson, Maryland

LEWIS M. TERMAN, Leland Stanford Junior University, Stanford University, California

## CONTENTS[1]


AUTHOR'S PREFACE . . . . . vii

INTRODUCTION . . . . . 1

PART I. THE SOCIOLOGICAL STATUS OF PHYSICAL EDUCATION . . . . . 5

PART II. THE OBJECTIVES OF PHYSICAL EDUCATION . 21

PART III. THE PROGRAM IN PHYSICAL EDUCATION . . 47

1. The four phases of the program.
2. The school officers involved.
3. Criteria for selecting and organizing activities.

Section One. The Program in Physical-Training Activities — The Developmental Program . . . . . 53

Section Two. The Program of Training in Character, Morals, and Manners . . . . 87

Section Three. The Program in Teaching Hygienic Behavior . . 105

Section Four. The Program in the Control of Health Conditions or Health Handicaps . . . . . 123


[1] A detailed table of contents is given at the beginning of each section.

# AUTHOR'S PREFACE

THE plan for organizing physical education as presented in this book is the product of long years of experiment and research. It had its beginnings at Stanford University in 1894, and its final and most severe experimental testing as the state program of California, where it was set up under the state physical education law of 1917.

While the author was instructor in the gymnasium at Stanford University, he observed that the coaches of athletic teams were getting results which could not be secured through the most systematic and intensive organization of gymnastics. This observation led to a long series of experiments for developing forms of athletic activity and organization adapted to the mass of average students who had no ability to engage with satisfaction in the specialized forms of activities to be had in the athletic associations. The experiments begun at Stanford were shifted, in 1896, to the Whittier State School, a juvenile reformatory. There, during two years, the development of institutional playgrounds and the practical conduct of them revealed in a most striking manner the moral and hygienic values of an educational organization of natural big-muscle activities and related "training" or conditioning procedures.

Later, at the University of Missouri from 1900 to 1910, with a department organization which controlled all the physical activities, inter-collegiate and intra-collegiate, of both men and women students, the author subjected to an elaborate and exhaustive experimental development the idea of educational athletics for all

the students. An essential part of this idea was the use of play fields, which were considered as laboratories of moral and hygienic self-discipline as well as of physical development. At the same time the author, in organized university extension work in physical education, conducted a wide promotion of educational athletics in the high schools of the state, and of playgrounds and play programs in rural and small-town elementary schools. These organizations of school community play centers and of programs of play activities were studied as local experiments. Later, in the University of Wisconsin from 1912 to 1918, the author, as professor in charge of professional training courses in physical education, further developed the practical details of the program through a study of the practice teaching of students in professional training courses.

In addition to all these *practical* experiments, observations, and experiences, *theoretical* studies and investigations have furnished the basis for the principles underlying the program. The principles determining the selection and adaptation of activities were worked out with students in advanced theory courses in physical education at the University of Wisconsin. This involved, on the one hand, a classification of age incentives, capacities, and needs with sex differentiations and individual differences; and, on the other hand, a psychological analysis of all the play activities in which children engage, and a numerical evaluation of the activities according to criteria of values of the big-muscle activities.

The statement of objectives is a summary of a broader

treatment, which has been given as a course on the principles of physical education and formulated (on a background of the general philosophy of education) from a study of the results of the experiments and from many investigations which have not been published.

The references to the status of children's play, to the influences of social conditions on play, and to play conditions in schools are based on play and recreational surveys made by various persons since 1906, but especially on the author's observations and on surveys which he conducted or directed. The most important of the latter was the Madison Recreational Survey published by the Madison Board of Commerce. Wide and careful study of conditions in five states, and more rapid observations made possible through extensive travel in many states (especially under the Joseph Fels Endowment), give some scientific basis for the statements made about play.

Physical education has come under the sway of social and educational movements that are creating a new conception of it and are determining its place in the organization of the school curriculum. These movements and their influences must be understood if a program of physical education is to be formulated which will meet the needs of children and the social demands of the times. This sociological analysis is given in Part I of this book, the contents of which are divided into three parts.

Physical education has objectives that are different in emphasis from those of other subjects of the school curriculum. Else why should there be a program of physical education at all? Part II is devoted to the

formulation of the distinctive objectives of physical education.

Finally, physical education requires the selection and organization of a curriculum of activities and a formulation of procedures in dealing with children; and the procedures must be based on principles that will achieve the special objectives of physical education under present-day social conditions. The principles for guidance in this task are formulated in the four sections under Part III.

In a word, this book is essentially a brief treatment of the social status, the objectives, and the principles of organization of the school curriculum in physical education. The detailed organization of the selected activities and procedures with children, for the daily use of teachers and supervisors, are to be dealt with in teachers' manuals; namely, one on the leadership of big-muscle activities; one on teaching efficient living or health; one on character training through big-muscle activities; and one on the control of growth conditions, or health supervision. These books, in the original plan of the author, were to be issued as a unified series. The desire of the National Education Association Commission on the Revision of Elementary Education for a report on a school program in physical education has resulted in the publication of this book as a separate condensed report.

While this report is presented under the auspices of a commission on elementary education, the principles in the program apply to secondary education with no less force than to elementary education.

The author is indebted to Dr. E. L. Thorndike, Dr.

David Snedden, and Dr. Albert Shiels, of Teachers College, Columbia University, for reading the manuscript and for encouragement and valuable suggestions.

CLARK W. HETHERINGTON

INSTITUTE OF EDUCATIONAL RESEARCH,
TEACHERS COLLEGE, COLUMBIA UNIVERSITY

*June, 1922*

## INTRODUCTION

1. The steps in constructing the curriculum.
2. The word "program."
3. The word "activity."
4. The conception of the program.

# SCHOOL PROGRAM IN PHYSICAL EDUCATION

## INTRODUCTION

### 1. THE STEPS IN CONSTRUCTING THE CURRICULUM

The construction of the school curriculum in physical education requires four steps: (1) An analysis of the influences of social changes upon the activities of children and of the status of physical education in the community as a whole, (2) a formulation of the special aims or objectives of physical education, (3) the formulation of a school program in physical education, and (4) the formulation of detailed courses of activities, with a specification of materials and an outline of procedures for the convenience of teachers and children.

### 2. THE WORD "PROGRAM"

By an educational program here is meant a plan of organization of some phase of the school curriculum, considered necessary to bring out the essential objectives of that phase of the curriculum. Teaching and administrative procedures are based on the plan.

### 3. THE WORD "ACTIVITY"

The word "activity" will be used as the inclusive term covering the whole content of the educative process, of both play and work, in school and out of school. It covers all the educative behavior, physical or mental, out of school; it covers the whole school

curriculum (referred to as a curriculum of activities), or any specific item in the curriculum (referred to as an activity). It is the total response involving all physical and mental elements. It includes the situation, the response, the results. The *idea* or *fact* is not the core of the curriculum; it is only one item in a total activity. The "project" is an activity or a series of activities. The "problem" is the difficulty in an activity or series of activities. Experience, itself, is an activity or a result of activity. Activity is the sole means of education.

### 4. THE CONCEPTION OF THE PROGRAM

The school as an institution performs two broad functions in dealing with children: (1) It formulates a curriculum of activities with educational objectives, and it organizes and leads the activities; and (2) it formulates a program in physical welfare (i.e., the protection of children from mechanical injury, fire and health handicaps), and it controls these injurious and handicapping influences. These are the old functions of parents, organized as school functions. The relationships and distinctions between these two functions as school functions and as responsibilities of the teacher are of fundamental importance in building a program in physical education.

Physical education began its evolution in the school primarily as a program of activities. It has been centered in a program of physical-training activities. If it were not for this historic fact and the influence of the old distinction between the mind and the body, the term "physical training," and then, later, the term

"physical education" (with the confusing use of the word "physical") would not have arisen. Physical education has been, and of necessity must be, in control of one of the great major divisions of educative activities, the big-muscle or physical-training activities. Thus physical education is apt to be interpreted by adults *from an adult standpoint* merely *as exercise.* But the *meaning of physical education* is not confined to the organization and leadership of the activities *as exercises in the adult sense. The* program *in physical education is determined by the inherent and essential values of the activities for the normal growth and development of children, and by the functions of the school and teachers in the leadership of children.* Therefore, the formulation of the program must be based on preliminary studies of the sociological status and the educative and protective functions of physical education. Further, the formulation of the detailed course of activities for the use of teachers must be based on a clear understanding of the principles involved in the program with its background of social demands and of objectives. For these reasons, the analyses and formulations which follow, will be confined to the first three steps outlined in the opening paragraph above, and presented under three parts as follows:

Part I. The sociological status of physical education.

Part II. The objectives or aims of physical education.

Part III. The program in physical education, divided into four sections.

## PART I

### The Sociological Status of Physical Education

1. The changing program in physical education, and causes
2. The retarded development of physical education.
3. The rise of physical education.
4. The reconstructing movements —
   - A. The athletic movement.
   - B. The playground movement.
   - C. Educational-recreational movements.
   - D. The "health through exercise" movement.
   - E. The war examinations and physical-efficiency campaigns.
5. The results of the movements —
   - A. The development of a public opinion for an American program.
   - B. The development and formulation of the technical material of a program.
     - (1) Divisions and descriptions.
     - (2) Detailed classification.

# PART I

## The Sociological Status of Physical Education

### 1. THE CHANGING PROGRAM IN PHYSICAL EDUCATION, AND CAUSES

The content and purpose of the program in physical education, as organized in the public schools, is in the process of an enormously important change. This is coincident with the changes which have taken place in recent years in the functions of the school as a whole. Social conditions (growing out of the introduction of machinery into industry), have squeezed much of the old industrial, social, recreative, and domestic educational activities out of the home, and the new demands of a civilization daily growing more complex have compelled the school to take over and greatly elaborate the old simple processes of education in the home and the community. Hence we have seen the shifting of the old educational functions of the home and the community to the school, and their elaboration in the forms of "cultural education," science, manual training, home economics, industrial and vocational education, civic education, social education, moral education, art education, health education, recreational education, etc., with even suggestions of religious education.

Physical education is caught up in this general movement, but under peculiar attitudes.

Originally there was no physical education in the public schools. It went on in the vigorous play and the hard work of the home and the community; that is, in

the stunts on the natural apparatus of the environment, in the chasing and fleeing games, in the swimming and the hunting, in activities stimulated by the activities of parents, in running about, in the arduous walking and riding in getting from place to place, in the work of the home, etc. These activities went on through most of the waking hours, during practically three hundred and sixty-five days in the year, and all through childhood and youth. In a word, the functions of the school were chiefly to teach the written language.

This situation, during the last forty years especially, has changed radically. The rise of new adult social customs has eliminated a large part of the old activities[1] and interfered with traditions in respect to children's play activities. The school also has made new demands on children's time. A new need for a universal and systematically organized physical education in the schools has been in evidence for at least the lifetime of the present generation of school children.

### 2. RETARDED DEVELOPMENT OF PHYSICAL EDUCATION

Four powerful groups of social influences have inhibited the development of a program of physical education to meet the growing demands of the time:

A. **Public opinion** about school functions has been conservative. The introduction into the curriculum of new activities with new aims has been difficult. As the ideas of the old linguistic and intellectual functions of the school persisted, the "physical" activities with their different aims naturally received late general consideration.

[1] Based on numerous social and recreational surveys made since 1906.

B. **National experience** has been against the development of a public opinion in favor of physical education. Only within a few years has the nation come out of the dominating influences of pioneer life. In the youth and the traditions of the generation which until recently controlled public opinion, life was more generally in the open, more strenuous, varied, and exciting. Children had a natural, outdoor life which stimulated play, and they entered directly into the simple, multitudinous activities of the home and the community, and imitated these activities in dramatic play. Adult recreative customs were closely knit into the domestic, industrial, and social life, and children entered into these activities. Hence a general consciousness of the need for a school-organized physical education has been of recent origin.

C. **Powerful prejudices** which are subtle social survivals in the cultured public mind have militated against the development of physical education. These are (1) asceticism with its exaltation of the mind and contempt for the "physical"; (2) scholasticism with its emphasis on the intellect and neglect of the instincts and emotions; and (3) Puritanism with its worship of seriousness and its depreciation and fear of play. Children have suffered from *the common American idea that play is synonymous with fooling, or is an activity that is not worth while.*

All these surviving emotional attitudes have been focused on the "physical" side of education. The word "physical" arouses the old subtle contrast with the "mind." To the traditional thinker the play of the emotions in physical-training activities is more

conspicuous than the functioning of the intellect. "Physical play," so misunderstood by the Puritan, is the chief technique of physical education.

The influence of these traditional attitudes has been profound; and they are still the controlling undercurrent in the progress of physical education.

D. **Traditional educational thought,** research, and professional training have been directed to the intellectual side of education and its psychological foundations. The corresponding study of physical education and its physiological, as well as psychological, foundation has been neglected by educational experts. University schools of education have neglected the training of experts in physical education. Hence school officials, graduates of these schools, have been left without criteria for judging the values of the activities, their organization, and the teaching process in physical education with the same skill that they judge other phases of education.

### 3. THE RISE OF PHYSICAL EDUCATION

The rise of technical school physical education proved to be uninviting to the majority of children, teachers, school officials, and scientific students of education. It took the form of drills. Naturally, when school authorities in Europe began to think of physical education in a society controlled by military discipline and in a school organization dominated by formal discipline, they thought of gymnastic drills. This idea took root in America. Gymnastic or calisthenic drills (schoolroom gymnastics) have been, until recently, the traditional activities emphasized

wherever physical education has been organized in the public schools. Most people have thought that physical education consisted of drills. Associated with this idea were notions of the values of the drills for "health" and "discipline." The old aims of school physical education were to correct postural defects and to keep children fit for their intellectual work.

It was natural, in the rise of physical education in the United States, for the advocates of the German and the Swedish systems to struggle for their establishment. This led to a controversy; but the efforts to establish either system failed. Both contributed generously to an American program; but it now seems clear that a program of physical education which is not indigenous to the soil will not work in America. Elements that are common to the life of humanity will work satisfactorily in any nation; but a system which has drawn the breath of life from a foreign culture radically different in its purposes from anything in the life of America, cannot be transplanted. America demands and is building a program which helps train children for the free, democratic self-directing responsibilities of American citizenship.

Though the drill program has until recently held the spotlight, it has been neither universal in application nor satisfactory in results. The activities were not calculated to make it popular. The results were not inspiring. Gymnastic drills have been conducted in some schools for many years, yet, except in cities where the school administration employed a supervisor, and in an occasional small-town or rural elementary school, the vast majority of schools, and of children in those

schools, have never had even a first experience in such drills, to say nothing of a more liberal organization of physical education. Moreover, where drills were organized, the educational results were very narrow and unsatisfactory, and there was no real contribution to a physically and morally disciplined citizenship.

### 4. THE RECONSTRUCTING MOVEMENTS

For many years great social and great educational movements have been evolving an American program.

A. **The athletic movement.** The oldest of these movements is the *athletic movement.* The interest in athletics, inherited from Great Britain, took root in our colleges. In the form of intercollegiate contests it gradually gained momentum, and swept across the continent in the late eighties and nineties. It spread to the private secondary schools and high schools, and *interscholastic* contests became practically universal. In 1905 the movement for the organization of athletics for elementary-school children became marked and soon gained nation-wide recognition. This first took the form of public-school athletic leagues. The significant part of this movement at present is the growing emphasis on *educational athletics* as distinct from *spectator's athletics.* Because educators neglected the direction of these activities, as part of the education of youth, and let them grow up under the influence of the spectator, a bad spectator attitude has developed. Consequently, *interschool contests* in universities, colleges, and most high schools are dominated in spirit and management by the ideas of the partisan spectator. But in spite of this the athletic movement

has established national athletic sentiments and ideals, which are being rationalized by the struggle for educational athletics. *Athletics bulk large in the national conception of a program of physical education.*

B. **The playground movement** Next in point of time is the *playground movement*, which began in formal organization in 1906. It quickly became a national, then a world movement. This playground movement arose out of the needs of children and society for the creation of playgrounds to take the place of the old play spaces, and especially the organization of educational play so largely destroyed by adult industrial society. Children have always had their rallying places — places where they met to play. Any place they played in was to them a "playground" in this old spontaneous sense. The playground is a *new educational institution* organized by society to perpetuate this old play life of children. It is a play center for the children of the community, where they can enjoy the same activities and get the same development and discipline they have always secured through similar activities in the home environment.

The movement started with the idea of establishing play spaces for children in the congested parts of cities. But experience quickly demonstrated that playgrounds were as essential for every section of city and country; that their significance for morals and the development of citizenship was as important as their values for physical development and health, and that proper leadership was even more important than the spaces. Although other than physical-training (big-muscle) activities have been organized on these playgrounds,

the characteristic and permanent activities of the playground are the physical-training activities. For instance, music and dramatics have been organized on the playgrounds. *The playground is a physical-training plant, and the essential activities of the playground are physical-training activities.*

Stimulated by this vitalizing movement, technical experts revived and systematized the old, natural physical-training activities. The stunts formerly performed with the natural facilities of the environment were revived on new play apparatus. The old tag games were revamped in great numbers for practical use. The folk games of the nations were selected and formulated as physical-training activities for children. Athletic activities were simplified and enormously expanded. The old swimming hole was reincarnated in a cement-and-tile-lined structure. Hiking and outing trips were reëstablished as holiday functions. Winter sports were promoted, and so on. *These are the essential activities of the new, yet old, physical education,* and the striking fact is the way in which these activities are being incorporated into the physical-education program of the school. The school playground is coming to be the natural play center for the children of the district.

C. **Educational recreational movements.** Several educational-recreation movements, the most conspicuous of which is the Boy Scouts of America, have added a powerful influence. The Boy Scouts' program, for example, covers other than physical-training activities — such as the manual activities — but the group membership, the group leadership, the tactical control of the group, the games, the organization of

hiking activities with self-protective skills and first-aid resourcefulness, and the incentives to achievement for honors, etc., are all essential elements in a physical-training program; and some of them are specifically physical-educational procedures. The Boy Scout movement has helped to set public opinion for a constructive program in physical education.

D. **The "health through exercise" movement.** Since the late nineties a great popular movement for *health through exercise* has arisen. The increasing strenuousness and confinement of occupations created, among business and professional men especially, a growing consciousness of a personal need for exercise. It had no scientific leadership largely because of the old ascetic attitude toward the "physical." But the extent of the feeling of *need* is illustrated by the host of advertising "Physical Culturists" who arose to supply and to stimulate a demand. The advertising columns of any of the popular magazines of the last twenty-five years illustrate the point. Some of these advertisers made large sums of money in a single year.

Better expressions of this same need and interest are seen in the great development of golf and other recreations, and in the war efforts to promote "keeping fit." This all represents a development of public opinion in favor of the first essential element in physical education — physical exercise.

E. **War examinations and physical-efficiency campaigns.** The revelations of the *war-draft examinations* concerning national physical efficiency came as a shock to public opinion. Although scientific physical educators knew, as a result of great experience in giving

physical examinations, that the poor physical conditions existed, they could not get a hearing for an organization of a program of physical education which would be productive of results. But when the conditions became known generally they aroused the public conscience. The efforts to condition the army recruits through physical training, the added use of recreative athletics in developing a morale among soldiers, and the promotion of a civilian "keep fit" program, were profoundly educational in arousing a consciousness of a great national need for physical development.

### 5. THE RESULTS OF THE MOVEMENTS

These movements and others, like the school health movement, which need not be described[1] here, have resulted in two things: a public opinion and a technique.

**A. Public Opinion.** The movements have developed a public opinion, a body of ideas, sentiments, convictions, faiths concerning the big essential elements in a program of physical education, which are characteristic of the spirit and the life of America. A conscience concerning an educational need has been stimulated. It was submerged under the atrophying influence of subtle social traditions. Public opinion is not yet clear in its recognition of all the elements in the movements under the correlating heading of physical education, but it is none the less influential in counteracting the old ascetic, scholastic, and Puritanical prejudices which made impossible an effective organization of physical education to meet the needs of the time.

[1] Given under the program in the control of health conditions.

B. **Technique. Divisions and descriptions.** The technical result of these movements is a great mass of formulated physical-training activities which are the essential "materials" in a program of physical education. The activities must be classified under three broad divisions, or classes, as follows: *First*, the natural; *second*, the related; and, *third*, the formal physical-training activities. Each of these has several subdivisions or groups.

*The natural physical-training activities* all arise out of children's instinct tendencies and emotions in play; the *forms* of the activities are determined largely by tradition. The several groups of natural activities arise (I) out of children's interest in self-testing, or in stunts; (II) out of the mimetic or dramatic tendency as expressed in big-muscle activities; (III) out of the enjoyment of rhythmical movements to music; (IV) out of the chasing, fleeing and tag, or hunting games; (V) out of the competitive tendency in athletics, and (VI) in personal combat. All the tendencies in these activities are repeated (VII) in water activities and (VIII) in winter activities, where the different physical conditions or environments give new opportunities for their expression.

*The related physical-training activities* are also natural activities. They are classified under a different heading because they arise, entirely or in part, from mixed interests or from interests other than those which have for their purpose pure physical education. They include, (IX) locomotion from place to place; (X) outing activities involving a nature or sporting interest, and (XI) labor or vigorous industrial activities.

*The formal physical-training activities* are all invented movements, or natural movements, like walking, formalized for formal purposes. They include, (XII) marching and tactical activities in great variety; (XIII) postural activities for teaching posture; (XIV) gymnastic drill activities formulated from the three standpoints of postural correction, discipline, and development, and in variety to the limit of invention in human motor mechanics.

A detailed classification of physical-training or big-muscle activities is presented below:

First. *NATURAL OR PLAYFUL ACTIVITIES.*
Activities Arising out of Instinct Tendencies.

I. *Self-testing Activities. Achievements or Stunts.*
A. Locomotor stunts.
B. Floor or ground stunts.
1. Individual and partner.
2. Group (pyramids).
C. Apparatus activities or stunts. Apparatus play or gymnastics on playground and gymnastic apparatus.

II. *Dramatic Activities.*
A. Impersonating plays. Story plays.
B. Constructive dramatics, circus, etc.

III. *Rhythmical Activities. Dancing.*
A. Singing games and folk dancing.
B. Gymnastic dancing.
C. Æsthetic dancing; Interpretive and expressive dancing.
D. Social dancing.

IV. *Hunting Plays and Games.*
- A. Chasing, fleeing, tag or "It" games.
- B. Tag ball games (not athletic or team games).

V. *Athletic Activities or Contests* (Measurable or scorable activities).
- A. Individual events. Running or track events and floor or field events; also measurable elements of athletic games and adjustment achievements.
- B. Athletic games.
  1. Single and dual (Tennis, racquets, etc.).
  2. Team games (Minor or major co-operation).

VI. *Personal Combative Activities.*
- A. In combative plays.
- B. In formal fighting activities or achievements.
  1. Wrestling.
  2. Boxing.
  3. Fencing.
     a. Single stick (cane).
     b. Broadsword.
     c. Foils.
  4. Miscellaneous forms.

VII. *Water Activities* (*Aquatic*).
- A. Wading, swimming, and diving activities.
  1. Swimming and diving achievements.
  2. Swimming contests.
     a. Individual events (also teamed).
     b. Team games.

B. Boating and canoeing activities.
1. Rowing and paddling achievements.
2. Contests.
a. Individual events or contests.
b. Crew rowing and paddling events.
C. See *Sailing* under *Outing Activities* (Div. B).

VIII. *Winter Activities* (*Snow and Ice*).
A. Snow dramatizations and games.
B. Locomotor achievements.
1. Skating. Stunts. Figure skating.
2. Skiing.
3. Snowshoeing.
C. Snow and ice contests. Winter contests.
1. Individual events.
a. Skating and jumping events or contests.
b. Skiing and jumping events or contests.
c. Snowshoeing events or contests.
2. Team games. Skating games.

Second. *RELATED ACTIVITIES:* Activities arising out of necessity or a "nature" or industrial interest.

IX. *Locomotor or Place Adjustments.*
A. Walking from place to place.
B. Locomotor adjustments with aid of animals and play machines.

X. *Outing Activities involving a nature interest.* Chiefly of value for week-ends and holidays, or for adults.

A. The more vigorous forms.
   1. Tramping or "hiking." Climbing.
   2. Nature Excursions.
   3. Bicycling trips.
   4. Canoeing trips.
   5. Hunting and fishing trips (with tramping).
   6. Horseback riding.

B. The more passive forms.
   1. Shooting (marksmanship without tramping).
   2. Camping (apart from tramping) and Houseboating.
   3. Driving
   4. Fishing (without tramping).
   5. Sailing.
   6. Power boating.

XI. *Industrial Activities.*
Especially those involving free, vigorous and stimulating muscular activity; i.e., gardening, vigorous manual activities, etc.

Third. *FORMALIZED OR INVENTED MOVEMENTS: Exercises and drills.*

XII. *Marching, Tactics or Military Drill. Formalized locomotion.*

XIII. *Postural Instruction.*

XIV. *Drills.* Corrective, disciplinary or developmental movements; calisthenic or gymnastic drills.

XV. *Special Corrective Movements* or Gymnastics. Selected for a special functional purpose.

## PART II

### The Objectives of Physical Education

1. The immediate objectives in the organization and the leadership of child life as expressed in big-muscle activities.
2. The remote objectives in adult social adjustment or efficiency.
3. The objectives in development —
   *A*. The development of the instinct mechanisms.
   *B*. The development of the intellectual mechanisms.
   *C*. The development of neuro-muscular mechanisms and nervous power.
   *D*. The development of organic power.
4. The objectives in social standards.
5. The objectives in the control of health conditions.
6. Definition of physical education.

# PART II

## The Objectives of Physical Education

### THE FIVE OBJECTIVES

Physical education is a phase of general education, and its objectives should be interpreted in terms of the objectives of education as a whole. The difficulty with this effort is that physical education adds special and new objectives to the old objectives of the school. Every new activity absorbed into the school curriculum expands the objectives of school education.

One of the striking facts about the history of education is that it presents a long series of the ideas of thinkers about education and of analyses of school practices. Relatively little is said about the education which went on outside the school; yet the vital phases of education went on in the home and in the social life of the community. The school arose to teach the written language. This took but a few hours for a few months through a few years. The education outside the school went on through the total waking hours, three hundred and sixty-five days of the year, and through the succession of the years of life. Gradually the school has taken over, one by one, these home and community activities, and has elaborated and systematized them for school ends. Each addition has changed the total aims of school education.

Now that the old physical education of the home and the community is being organized as a school function, the aims of school education require another revision: they must include the values inherent in the

nature of physical training. These values are not given in the same degree by any other kind of activity in child life; yet they are part of the total aims or objectives of education.

Therefore the objectives of physical education must be stated, on a background of education as a whole, from five standpoints:

1. The immediate objectives in the organization and the leadership of child life as expressed in big-muscle activities.
2. The remote objectives in adult social adjustment and efficiency.
3. The objectives in development, or the changes in capacities, necessary to realize the adjustment.
4. The objectives in social standards as applied to the activities, the development, and the adjustment.
5. The objectives in the control of health conditions.

Each of these will be considered in order.

### 1. THE IMMEDIATE OBJECTIVES

The *first and immediate objective* of physical education is the *organization of child life* as expressed in big-muscle or physical-training activities. The organization of child life is the first aim of any phase of education controlling a natural activity. In this objective the adult leader and the children meet on common ground. It is the starting point in organized education.

Although children tend to enter into big-muscle activities, and all play activities, spontaneously, they need adult leadership. This need of adult leadership continues up through childhood and youth. The condition of American intercollegiate athletics indicates

what follows the neglect of leadership even in the college age. Social and traditional forms of play are always led either by older and experienced children or by adults. Leadership in physical-training activities has always been a natural function of adults, except as asceticism and Puritanism have eliminated it from among dignified avocations and vocations. Only recently, through the play movements, has the function gained recognition in America. It gained recognition because the influences of an adult organization of society were destroying the opportunity for, and the efficiency of, children's spontaneous play life. The cramp of the city and the isolation of children in the country suggest many influences that make children's play inefficient.

The big-muscle play life of children cannot progress normally without adult leadership. To some extent children will educate themselves in their natural activities if they are merely supervised so they will not destroy themselves. The spontaneous or play activities are the primary source of all education; but even in these, children require and they demand adult leadership. Little children cry for help, and they ask questions. These are instinctively driven appeals for help or for leadership. Even in the most spontaneous big-muscle play activities, problems or difficulties arise which are beyond the children's imagination as to resources for their solution; and unless they have a coöperating adult leadership, the play and the education involved in the play break down. Discouragement in projects is the daily tragedy of child life. The *leading-on* of the child's interest to the solution of the problem,

and to the resultant satisfaction, is the function of adult leadership.

Big-muscle activities naturally consume large amounts of time. They continue through the three hundred and sixty-five days of the year, all through childhood and youth. A large part of child life is centered in them. Yet social conditions in the homes and in the community life of most children are all *set* against an efficient organization of these activities. Schools are demanding increasing amounts of the time of children, *and* larger numbers of children are being brought together in school. Hence the big-muscle play is being centered in the school. In these crowded play centers a democratic organization of play is beyond the imagination of children. This organization is an adult function. Therefore, the *first objective* of physical education is to make this play life efficient.

### 2. THE REMOTE OBJECTIVES

The second point of view in considering objectives is social adjustments. *Social adjustment* is the *remote* objective of education. The race has built a complex mass of customs which relate to the functions of life. These customs are adult adjusting activities. Thus we have several great groups of adjusting activities and customs: economic, defensive, domestic, communicative, civic, interpretive, artistic, and recreative. Every child born into any community must become adjusted, in some degree, during childhood and youth, to these adult customs. The process is slow.

Adjustments are largely gained by entering into the specific adjusting activities of adult life. Children enter

into these activities gradually, and as gradually gain adjustment. But they go through years of growth, and they spend huge amounts of time in activities which have no direct specific relationship whatever to adult adjustment. Thus, although some adolescent physical-training activities contribute directly and specifically to several phases of adult adjustment, like protective and recreative skills, most of the activities make no direct contribution to *any* phase of adult social adjustment. These activities must be learned, but they are not learned because they are to be used in adult life. Children do not perform stunts on the apparatus or play tag because these activities are to be used in adult life. These activities have no serious place in adult life, yet they consume a large amount of time in child life. Children do not engage in folk games, or even in athletic or water activities because these activities are to be carried over into the adult functions of life; and adults do not teach these activities for any such reason.

All these activities are *pure developers of latent powers. They are spontaneous play activities.* They arise out of growth needs, and are determined in form by growing instinct tendencies and emotions as expressed through the big-muscle mechanisms. In this exercise of the instincts and the emotions children gain great satisfaction. The activities consume large amounts of time because they meet fundamental growth needs and are so satisfying. Their values for adults *are not in the "carry over" of the activities, but in the development resulting from the activities.* They are part of Nature's scheme of *developing* abilities *which make it possible for children to enter into adult adjusting activities.*

Physical-training activities, then, develop a great range of powers which gradually establish the capacity for the specific activities of adjustment. They are the developmental foundation of adult efficiency in any phase of adjustment. This must be shown by a consideration of the developmental objectives.

### 3. THE OBJECTIVES IN DEVELOPMENT

The third standpoint in considering objectives is the development of latent powers or capacities. The *development* of *personal* capacity is the mediate objective of education. Children go through a long period of growth, engage in a vast variety of activities, and thus develop latent capacities. The results of this developmental process are accumulative. Changes take place in behavior and in the functional capacities of the organism, which must be analyzed from four standpoints: (*A*) The development of the instinct mechanisms; (*B*) the development of the intellectual mechanisms; (*C*) the development of the neuromuscular mechanisms; and (*D*) the development of the organic mechanisms. These *phases* of development will be considered in order.

*A*. **The development of the instinct mechanisms.** Activities arise out of hungers and out of instinct tendencies to respond to certain situations. The tendencies to respond are developed through resulting satisfactions or annoyances. The end products are character traits. The *process* in development is a building of a great mass of desires, impulse habits, ideas, and

ideals. The quality of the traits developed is determined by leadership and judged by social standards. These traits are the objectives of education in the field of character and morals.

All activities have character-training values *according to the instinct tendencies they exercise.* The *worth* of any activity for character discipline is determined primarily by the nature of the instincts and the emotions exercised. Some activities are better for the development of certain traits; others are better for the development of other traits.

The values of physical education in character training bulk large, because natural *big-muscle activities are the outcroppings of the most fundamental instincts and emotions in human nature.*

To illustrate: The activities, or stunts, on the ground or on the apparatus of the playground or of the gymnasium are all self-testing activities, and exercise the deeper instinct tendencies which drive to a mastery of the big-muscle motor mechanisms of the body. There are, also, manual, vocal, and sensory self-experimentations, but the character discipline and the moral challenge in these are not so great. The hundreds of chasing-fleeing-tag games are all dramatizations of situations in the social relationships of children which exercise the old racial instincts and emotions of hunting, attacking, fleeing, escaping, etc., in the acquisition of goods and in the protection of the self — that is, in getting food, and in keeping from becoming food, or from being destroyed by human enemies. As such, they express in the social relationships of children the deepest instincts of human nature. These instinct

tendencies have no comparable exercise in any other activity of child life.

Again, athletics are big-muscle, social, fighting plays. By the word "athletics" is meant all forms of big-muscle competition in which all boys and girls engage, not interschool athletics alone. Athletics involve (*a*) a social relationship between two or more individuals, which expresses the social instincts and emotions. This relationship (*b*) is centered in a contest which exercises the fighting-instinct mechanisms and emotions. In the contest (*c*) egoistic feelings are at stake, which is indicated by the anticipation of the outcome of the contest and by the final elation or depression. Thus athletics *exercise* deep, powerful, social, fighting and egoistic tendencies and emotions.

In a similar manner the other natural physical-training activities might be analyzed. In the activities character traits are developed. Human character is fundamentally an expression of the instincts exercised. Social life cannot go on a minute without an expression of them. In the activities they are developed inevitably. *The development is inherent in the nature of the activities.* The *form* of the development determines the fundamental qualities of any character. Physical education gives this development; its most inspiring objective is to determine the quality of the development.

The essential thing to recognize in this connection, therefore, is that, in physical-training activities, the deepest, most powerful instinct tendencies, and emotions of human nature are exercised. This is important, since a great deal of uncritical popular material has been written in recent years concerning

the character development and the moral training which take place in physical-training activities. The traits developed have been expressed frequently in terms of the old abstract, or formal, moral education, viz., "initiative," "honesty," "coöperation," "self-subordination to the leader," "loyalty to the group," and so on through the whole category of virtues. Now, these qualities undoubtedly appear in the activities; and they may or may not have some relationship to similarly named qualities in adult social life. Educators object to the terms because they suggest a transfer of training. But the essential points to understand are: (*a*) that growing human tendencies are being exercised, and (*b*) the exercise of them may be at either end of, or at any stage between the extremes of inspiring fineness and utter viciousness. If there is self-subordination to a leader (and there frequently is), it may be to an extremely bad leader as well as to a noble leader. If there are loyalty and coöperation (and there frequently are), they may be to a bad organization and in a bad cause, as well as to the best of these. Character traits are exercised, but they are exercised for good or for ill.

The expressions of character or of morals may be good or bad, hence *the development tends to be good or bad according to the leadership.* The leader sets the standards. In no other activity does adult leadership have greater moral power. In this leadership we have a laboratory method in moral education. It is a foundation method on which the more refining activities may be built. *Character and moral training, therefore, is an essential developmental objective of physical education.*

*It arises out of the inherent nature of the activities.* The quality of the traits developed depends on the *leadership supplied by physical education.*

B. **The development of the intellectual mechanisms.** Physical-training activities must be learned; hence, there must be thinking or an exercise of the intellectual function and an acquisition of information.

The primary learning process in the activities is centered in mastering the *coördinations* of the big-muscle groups of the body, and in adjusting these coördinations to the situations of the environment. This learning of coördinations begins in the early movements of locomotion; i.e., in learning to sit up, to creep, stand, walk, run, climb; it continues in the great variety of stunts on playground and gymnasium apparatus, in handling big objects, in games, in athletics, in swimming, etc. These coördinations are made in relationship to the shifting situations of the environment.

There are several other forms of motor learning, such as the use of the hand in the fine manual activities, and the use of the vocal mechanism in oral communication, or in singing. All this learning of coördinations involves thinking. Mental connections or bonds are made; habits are formed; skills are established. In this way the capacity *to think, and to will the movements of the body is established.* It is the source of motor skill and of motor will power in adjustment.

In the adjustments of the movements to the shifting situations of the environment, there is alertness of attention, thinking to size up the situation, judgment and response. The lightning-like rapidity of these

*strategic judgments* are conspicuous in such games as basket-ball and football; but they are just as essential in a lesser degree in every game. These activities develop *strategic judgment:* a habit in thinking. Skill in strategic judgment is the source of personal "safety first" motor efficiency. Athletes are not run down by automobiles and street cars. Strategic judgment is also an essential element in the industrial adaptability and recreative resourcefulness of adults.

The information acquired in the learning of these big-muscle activities is of two kinds. The less important, though fundamentally essential for the activities themselves, is the knowledge of the physical characteristics of the environment and of the paraphernalia used in the activities. The other and more important knowledge is the insight gained into human nature. The natural physical-training activities are very intensive social experiences. They are expressions of human nature; they are experiments with human nature. In the actions and the reactions of children in their play relationships, ideas and habits of judgment about human nature are acquired.

While other and higher reaches of insight into human nature are gained through the specialized linguistic and social activities, for the majority of children the more fundamental insights are gained through big-muscle play. All children engage in these activities; they bulk large in time consumed. Judgment of human nature is part of that profoundly important knowledge and skill which contributes to all phases of personal social efficiency requiring ability to deal with human nature.

It should be noted that the development of the

capacities to think and to will big-muscle coördinations, and to make the strategic judgments and to judge human nature as described, are *inherent* in the nature of physical-training activities. Participation in the activities automatically develops the capacities, and the quality of development depends on leadership.

**C. The development of neuro-muscular mechanisms and nervous power.** In learning big-muscle or physical-training activities, nervous connections are made and muscle tissues developed. In the repetition of the activities, strengths and skills are developed. The development of strengths and skills is the source of all the motor powers of the athlete, gymnast, swimmer, and dancer. This point of view in considering the learning process emphasizes the results on the muscular and the nervous structures and functions. This development is frequently referred to as neuro-muscular development, since the mechanisms of behavior are muscle-nerve structures. It may also be called menti-motor or psycho-motor development. All such special habits and skills as posture and carriage are phases of this general neuro-motor development.

The development of muscular tissue is in itself of importance. But the nervous development is of chief importance. The nervous system carries the burdens of modern civilization. *Nervous development means building power for action out of the latent inherited resources in the nervous system. The development is gained only through muscular exercise.*

Objection has been made to the development of large muscles, since our civilization does not require great muscular strength. This is a sociological argument

without an understanding of the relationship between muscular development and nervous development. Natural muscular development is *a symbol of nervous development and functional power*. The nervous centers controlling the muscles can be developed only through exercising them by exercising the muscles. A thorough development of the big muscles means an equal development of the nervous centers controlling these muscles. It means an elaboration and strengthening of the nervous connections.

Every group of muscles has a group of nervous centers controlling it. There are nervous centers which control the big muscles of the trunk and of the limbs; and there are nervous centers which control the small muscles of the manual mechanism or of the vocal mechanism. For the development of nervous functional powers, the big-muscle activities are of first importance. The manual and the vocal mechanisms are relatively small. In the big-muscle activities all the nervous centers of the spinal column, the medulla, the cerebellum, the basal ganglia, and the motor centers of the cortex are involved and developed — all except those centers controlling the finer integrations of the fingers, the vocal and sensory mechanisms.

This development is the source of all the fundamental strengths and skills; but, much more important, it is the source of developed nervous vitality and staying power: i.e., nutritive power which is explained under organic development. Every normally developed nervous center means so much functional power and capacity to endure. The learning of a series of movements gives the power to think and to will the move-

ments. The repetition of the movements to the point of developed strength and skill integrates the body as a powerful organ of the will in those movements.

This nervous power in the big neuro-muscular mechanisms is the source of nervous efficiency for action in all phases of adult adjustment. It gives special *adaptabilities* in protective, recreative, and vocational efficiencies. The nerves that control the big muscles evolved to carry the burdens of life and to support the nervous centers that make the finer coördinations. Civilization is throwing the burden of activity on the finer muscles and the nervous centers controlling them — even on the higher associative centers. The big muscles and the controlling nervous centers have relatively less exercise in present-day adult life. On the development of them during childhood and youth, a large part of the physical efficiency of civilization depends.

The *degree* of the development of nervous functional power in any individual is determined, within the limits of heredity, by the variety, amount, and intensity of the activities during the years of growth. *Nature gives the impulses for the proper amount of activity in the repetition of play.* A boy throws a baseball ten thousand times in order to learn to throw it effectively. So it is with each activity. Through infinite repetition, the nervous centers controlling the movements are developed. Thus nervous functional power is developed, and it is developed in no other way.

Nervous development must be gained through *continuous* activity during the whole period of childhood

and youth. It cannot be gained after maturity, and it cannot be gained in any one year or group of years in either childhood or youth. No process of training can give the boy of eight the development possible to a boy of eighteen. And no training will give the boy of eighteen the development that should naturally be his, if the training of previous years has been neglected. The growth order in the child must be observed, and the normal development natural to each age must be secured. Not only does development require activity at each age, it requires also huge amounts of this activity. It is most apt to be neglected after the onset of adolescence.

It should be noted that these aims of physical education in the development of strength and skill and related nervous development are primarily educational; yet they have an important health value in the power and the stability of the nervous functions. This building of strength and skill and functional power in the fundamental integrating nervous centers of the body is an essential objective of physical education.

*D.* **The development of organic power.** In big-muscle activities the organs and the functions of nutrition and elimination are developed; in a word, nutritive power is developed. Synonyms of organic power are vitality, vigor, capacity to assimilate food and to expend great energy in work or in play, with a slow onset of fatigue or with a rapid recuperation. These powers indicate a development of the circulatory mechanism, respiratory mechanism, digestive mechanism, heat-regulating mechanism, the eliminating mechanism, and the nutritive processes in general. The development of these general

organic powers, latent within the hereditary possibilities of the organism, depends on vigorous activities.

The functional source of organic development is the combustion in the muscles and the nervous centers during activity; and the *value* of big-muscle activities for this development is in the *amount* of the combustion. In the vocal and manual activities the combustion in the muscles and the nervous centers used causes an increase in local circulation. Out of the *exercise* of these local nutritive changes are developed the great vocal endurance of the public singer or speaker and the great manual endurance of the pianist or of the typist. In these cases, however, the *amount* of combustion is not sufficient to heighten appreciably the general circulation or respiration.

On the other hand, in big-muscle activities (running, for example) the bulk of muscles involved and the amount of combustion are so great that the call for oxygen and the need for elimination of waste products causes a *greatly increased functional activity* of the circulatory, respiratory, and heat-regulating mechanisms, and soon of the digestive mechanism. The well-recognized signs of this heightened functional activity in vigorous big-muscle activities are the heart throbbing, the panting, the heat, or the sweating, and the later increased appetite, assimilation, and elimination. *Increased muscular activity causes increased organic activity.*

This development of organic power begins in the squirming and random movements of the infant, and continues in the creeping, walking, running about, and all the vigorous stunts, plays, and games of childhood and youth.

Although we have, generally speaking, no volitional control over the organic functions, *by controlling the intensity and the duration of big-muscle activity we can control indirectly and to a fine degree the heightened functional activity or exercise of the organic mechanisms and nutritive processes.* In this way we control the development of organic power. The process is well illustrated by the training of the athlete. For example, the distance of the run, or the amount of big-muscle activity, is determined from day to day, and thus the amount of activity, or exercise, of the organic mechanisms is determined. In the popular training cant we "run with our hearts" and "breathe with our legs." More, in this process we control the amount of assimilation. The athlete, according to his temperament, loses weight each day and gains it back the next day. This recovery of weight without left-over fatigue is the chief guide in "training," or the conditioning process. Since the food for this recovery of weight must come from the digestive mechanism, *the process involves a tremendous heightening of the nutritive functions.* They are exercised to meet large demands and are thus developed. The results in development are *inherent in the nature of the activities.* If the activities are engaged in, the results in development naturally follow.

The leadership of big-muscle activities to gain indirectly the exercise of organic functions, and thus the development of organic power, is an educational procedure; i.e., an organization of activities for educational ends. It establishes organic habits. The process is organic education. It is as accurate an educational

procedure as learning to read or to write. In some ways it can be more accurately determined.

Organic development (apart from the local development associated with vocal and manual skills) is purely the product of big-muscle activities, and thus the undivided function of physical education. The power is essential for efficiency in every phase of life adjustment; and it is a power which must be gained by the accumulative stimulation of nutrition all through childhood and youth. *Organic development or education is therefore an essential aim of physical education.*

Here is where physical education makes a direct contribution to health. It develops organic power, vitality, vigor — the developmental source of health. The developmental process alone, however, does not guarantee health. There are several other factors which influence health, chief among which are sleep and rest, diet, and avoidance of infection. Yet activity is the only source of organic *power* this side of heredity. All the other factors are favorable or unfavorable to the proper functioning of the organism — that is, to growth or to health. *Activity is the only source of the development of the latent powers that are planted in the organism by heredity.* This is not a distinction between the importance of the activity and the other factors. Sleep and proper nutrition are just as important as the activity, and they help determine physical condition for the activity. The distinction is between functions. Activity alone, of all the factors, develops latent resources. The other factors, as well as activity, determine physical condition.

It is important to note also that physical education

in its direct interest in organic development must emphasize the *educational* rather than the health objective. This is because (*a*) physical-training activities, if they are effective for children and for youth, require a special educational organization of facilities and leadership; because (*b*) the children's interests in the activities as educational achievements give the only school means of fostering a self-directing control of health habits through the "training" or the conditioning process; and because (*c*) exercise has a health value in adult life in maintaining nutritive efficiency, and adults with a refined egoism insist on applying adult hygienic standards to children.

The last point is important. According to popular standards, twenty minutes of exercise a day is sufficient for adult health. Adults apply this standard to children. Note our state laws. Experience has shown, however, that children of the elementary school age (if they are to gain the development necessary for efficient citizenship) need between four and five hours of exercise or big-muscle activities each day, and children of the high school age need from two to three hours. The difference between the two to five hours for children and the twenty minutes for adults indicates the difference in importance between *the educational function in developing power through the years of childhood and youth*, on the one hand, and *the hygienic function in maintaining efficiency after maturity*, on the other hand. Organic education, as here defined, is the most fundamental of all phases of education.

In summarizing these objectives in development it should be noted that the four phases of the learning

and developmental process enumerated above include all capacities in the development of human nature. Activity is the source of this development. In order to make clear the significance of *activity* in growth and development, a distinction should be made between the words *growth* and *development*.

*Growth* (in this differentiated sense) is the product of the hereditary momentum started at conception. It drives on to the completion of the structural and functional type latent in the germ plasm; i.e., the height, proportions, color, and response tendencies. *Development* (in this differentiated sense) is the *product* of *activity* which *arouses* or *stimulates latent resources* in the growing cells of the organs and systems of organs to functional activity. It is the change of potential possibilities into realized abilities. Given the essentials of food, sleep, freedom from infection, and sufficient exercise to keep the neuro-muscular tissues alive, the *growth* processes drive on toward the completion of the hereditary type; but there will be no *development* of the various latent capacities in the organism without a broad variety and intense quality of play and work. In these specialized senses the *growth* tendencies and possibilities are primarily hereditary matters, influenced favorably or handicapped by the environment; *development*, on the contrary, is essentially the product of the developmental activities of play and work and is an educational matter. *Developmental activity is the sole means of education.*

It has been shown that the big-muscle activities give the fundamental part of the development in each group of capacities; that is, in the development of the *instinct*,

the *intellectual*, the *neuro-muscular*, and the *organic* mechanisms. On the development of the powers enumerated, all phases of adult social adjustment depend, directly or indirectly. Other than big-muscle activities develop the powers for the finer coördinations and adjustments in life. The latter activities are more specific in their adjusting values than the big-muscle activities. The differences in results for the classes of activities are due primarily to the different inherent values of the activities for development. In a word, it may be said that physical-training activities give the broad, bulky foundation aims of education. On these foundation aims all the rest of education and of life adjustment are built as a refining superstructure.

Other values and corresponding objectives flow out of the opportunities which big-muscle activities give for a leadership in *standards*.

### 4. THE OBJECTIVES IN SOCIAL STANDARDS

The fourth point of view in considering objectives is social standards. *Standards* are the idealizing objectives of education. Society has created and is still creating criteria for judging every phase of human behavior and every trait in development or in adjustment. An individual may gain economic independence as a gambler, a quack, or a shyster. He may amass information without any truth. He may gain organic development, neuro-muscular skills, and impulsive and emotional development, and be unhealthy, awkward, and a "mucker."

Standards, as objectives in education, are criteria for guiding all activities which give development or adjust-

ment, and for judging the results in development and adjustment. By them the quality of the activities, the development, and the adjustment are evaluated. Standards are not different or separate activities from the activities which give development or adjustment. They function only as they are used to guide and to evaluate these activities, or the educational results of the activities. Further, development and adjustment are *inherent* in the specific values of different activities. On the contrary, the *quality* of the development and of the adjustment are due to the *way the activities are guided by a standardizing leadership.*

To classify standards on the same level with developmental or adjusting activities, or with the results in development or adjustment, leads to confused thinking. Standards are overhead objectives. They are on a higher level and apply to all other objectives. They require the establishment of another tier of habits, ideas, and attitudes in *control* of the habits, ideas, and attitudes being developed as results of the inherent values of the activities.

The distinction between activities and the standards in activities is important, because children tend to enter spontaneously into activities, and with satisfaction they drive on to some kind of development and some form of adjustment. But they are not directly interested in adult standards. They learn standards only through a *painstaking standardizing leadership.* The leader is apt to get lost in the concrete leadership of the activities and to forget the standards.

Physical education has objectives in three great groups of standards in addition to a number of technical

standards like posture and carriage. These broad objectives are in morals, manners, and health.

Because of the values of physical-training activities in the exercise of fundamental character traits, physical education must set up the proper moral habits, ideas, and attitudes which should come out of the leadership of the activities, and formulate a teaching technique to build them. The same is true of manners and of courtesy. This leadership is supplying standards in the development of the instinct mechanisms.

Health is a condition of the organism which is conserved or promoted by building standard habits, ideas, and attitudes in control of the activities which give direct satisfaction; e.g., eating, sleep, elimination, etc. Because physical education organizes and leads activities which are the chief developmental source of health, and because these activities focus the interest of children on physical education, the leader of the activities is in a key position to establish health habits. It should be remembered, however, that there are other phases of the curriculum concerned with health, such as biology, home economics, civics, etc.

In connection with standards *as objectives* it should be noted that citizenship is the great correlating objective of education. When analyzed, however, as an objective, citizenship breaks up into the several phases of development and adjustment enumerated above, judged according to social standards. Citizenship cannot be achieved by some separate or artificial scheme of activities. It is realized through the natural activities which give the several phases of development and the several phases of adjustment, which must be guided

according to social standards. Citizenship is the correlating ideal of democracy for guiding all the activities and all development and adjustment.

To realize standards in education, all the activities and all the leadership of teachers must be saturated with the overhead objectives.

Physical education contributes to the citizenship objective just in proportion as the inherent values of the activities which it controls contribute to the development of capacities or adjustments necessary for citizenship; and it contributes just in proportion as the activities and their values give the leader a strategic opportunity to establish standard habits, ideas, or attitudes in any phase of behavior.

### 5. THE OBJECTIVES IN THE CONTROL OF HEALTH CONDITIONS

The fifth point of view in considering objectives is *the control of health conditions.* This health control, or supervision, as an objective of the school is *quite in contrast to the educational objectives.* It is the protective and preventive function of the school. Its purpose is to free the educational process from handicapping influences.

Health control, however, is an essential function of the teacher. Every teacher must look after the safety and the health of children. The teacher is the one essential officer in the school, and the professional substitute for the parent. Where the school is departmentally organized, and the responsibilities in teaching different activities somewhat divided, the bulk of the responsibility for health control rests on the depart-

mental instructor in physical education. To realize the educational values of the big-muscle activities the teacher must control health conditions. As the overhead supervision of this control is an administrative problem, not a problem of objectives, it need not be considered here. With reference to this administration, however, it should be observed that these analyses of objectives show how utterly *administrators miss the essence of the educative process when they attempt to set up departments of health or morals or citizenship as separate or inclusive administrative units.* Instead, they should set up a conscience and a technique in teaching standards in every phase of the teaching process.

### 6. DEFINITION OF PHYSICAL EDUCATION

In summary of these objectives, we may define physical education as follows: *Physical education is that phase of education which is concerned, first, with the organization and the leadership of children in big-muscle activities, to gain the development and the adjustment inherent in the activities according to social standards; and, second, with the control of health or growth conditions naturally associated with the leadership of the activities, so that the educational process may go on without growth handicaps.*

# PART III

## The Program in Physical Education

### INTRODUCTION TO THE FOUR PHASES OF THE PROGRAM

1. The four phases.
2. The school officers involved.
3. Criteria for selecting and organizing activities.

# PART III

## The Program in Physical Education

### INTRODUCTION TO THE FOUR PHASES OF THE PROGRAM

#### 1. *The Four Phases*

The objectives of physical education just enumerated require the formulation of a program in physical education in four phases or sections, as follows:

Section One. **A program in physical training** (or in big-muscle activities) which is the source of all the developmental objectives of physical education. This may be called the developmental program or the program in big-muscle or physical-training activities.

Section Two. **A program in character, morals, and manners,** in two phases. (*A*) *A program in character and moral training* based on the inherent values of the activities in the exercise and training of the instinct tendencies and emotions and the necessity of adult leadership in moral standards in this automatic training; and

(*B*) *A program in training in manners* based on the social nature of the activities, the spontaneous expression in manners, and the necessity of adult leadership in standards of courtesy.

Section Three. **A program in teaching hygiene** or health based on the inherent values of the activities in the development of organic power as the developmental source of health and in the opportunities the activities give the leader for the organization of self-impelling incentives in developing health habits and attitudes.

Section Four. **A program in the control of health conditions** (*health control*, *protection*, or *supervision* for short) which is a general function of the school and of all teachers.

### 2. *The School Officers Involved*

In the formulation of the programs, the different school officials involved in the practical conduct of them must be taken into account.

In the elementary schools there are, in all schools, the elementary classroom teachers, and, in large schools, special or departmental teachers, usually one for boys and one for girls. In city and sometimes in county school systems there are supervisors and administrators, and frequently associated with these are special inspectors, corrective, and medical experts.

In schools above the elementary grades, the departmental organization, with directors or specialists, one for each of the sexes, is the customary organization. Frequently these organizing specialists in large institutions are assisted by a number of special instructors in the different activities and by other examining and corrective experts. The importance of this situation lies in the fact that the organization in these higher institutions is frequently suggested as a model for the organization in the elementary grades. The organization adapted to the college is shoved down into the lower grades.

In most elementary schools the whole burden of physical education rests on the elementary classroom teacher, as is customary in the other activities of the curriculum. This is the case, especially, in small rural

schools and in most small-town or small city schools. Very few elementary schools can have special departmental teachers.[1] Hence the program must be formulated in a detailed course of activities [2] so that the elementary teacher can conduct it; and the elementary teacher must be trained for the performance of the essential functions in the program. Even where the program is formulated in this way and the teachers trained in the essential processes, skilled supervisors are required. It is customary and necessary to place such supervisors in charge of elementary teachers. They should be experts and able to solve those problems for the teacher which require technical or professional skill. Even in large schools where special departmental teachers are employed, the more expert supervisor is usually necessary.

In large systems of schools the administrative functions of the supervisors are centralized in an administrative officer who ranks as an assistant to the superintendent.

In the formulation of the programs these supervisory and overhead administrative problems will be touched upon at the end of each section.

### 3. *Criteria for Selecting and Organizing Activities*

The criteria adopted for the selection and organization of activities in a curriculum in physical education are two: (*a*) children's needs, interests, and problems, and (*b*) adult social needs. The latter may be considered

[1] The departmental organization with special teachers probably represents the future organization in all large schools.

[2] These are given in a separate manual.

STATE
MEMORIAL LIBRARY
116296

from the standpoints of the children's future adult needs or the needs of society in their future behavior.

With the rise of the scientific movement in the organization of the curriculum, there has been a strong tendency to emphasize adult social needs as the basis of validity for selecting activities or materials for the curriculum. This emphasis on adult social needs is eliminating much useless material from the curriculum, and it suggests the total amount of the activities (or material) which should be covered by the end of school life. The emphasis on adult social needs gives, however, no indication of the grade placement or the relationships of the activities to the whole learning and teaching process.

The children's own native tendencies to enter into activities or deal with materials spontaneously and by age periods are the only scientific source for a selection of activities for grade placement (or age adaptation) and for the natural sequence in the learning and teaching process. As suggested under objectives, the children's own spontaneous or natural activities are the developmental source of the ability to enter into adult adjusting activities. The development, through the natural activities, is primary. Only gradually are these developmental activities and their results changed into the adjusting activities, and not until adolescence does the change become conspicuously rapid. The selection of activities according to adult social needs gives the content of the curriculum in adult adjusting activities. But children have their own laws of growth and development, and their own activities are related to this growth and development. The whole curriculum should be an

elaborated, systematized, and selected organization of developmental and adjusting activities, because these activities present *opportunities* for children to carry on their life enterprises with a natural progression, and they afford *resources* for teachers to help children solve their problems as they arise progressively. The very nature of big-muscle activities compels this attitude in the organization of the curriculum in physical education, whatever may be done in the other activities of the school.

## SECTION I. THE PROGRAM IN PHYSICAL TRAINING ACTIVITIES—THE DEVELOPMENTAL PROGRAM

I. *Selection of Activities.*
(Present attitudes.)
- *A.* The necessity of selection.
- *B.* Selection between the three great divisions of activities.
  1. Emphasis on the natural activities. Reasons.
     - *a.* Selection according to relative values for development.
     - *b.* Selection according to children's interests.
     - *c.* Selection according to the development needs.
       (1) The needs. The school's responsibility.
       (2) Fatigue and amount of activity.
     - *d.* Selection according to the teacher's function.
  2. Place and selection of formal activities, four groups.
     - *a.* Marching and tactics.
     - *b.* Postural instruction.
     - *c.* Gymnastic drills of three classes.
     - *d.* Special corrective drills.
  3. Place and selection of related activities.
     - *a.* Walking or place adjustments and outing activities.
     - *b.* Work or labor.
- *C.* Adaptive selection.
  1. Age adaptation.
  2. Sex differentiation.
  3. Individual adaptation. The examination for fitness.
- *D.* Evaluation.
- *E.* Practical selection. Environmental conditions.

II. *Organization of the Program.* Analysis of the teaching situation:
- *A.* Facilities.
- *B.* Organization of the time allotment.
- *C.* Plan of activities.
- *D.* Organization of children.
- *E.* Leadership and teaching.
  1. Managerial organization.
  2. Organization of incentives.
  3. Technical teaching and supervision.
  4. Class discussion.
- *F.* Supervision and administration.

## SECTION I. THE PROGRAM IN PHYSICAL-TRAINING ACTIVITIES — THE DEVELOPMENTAL PROGRAM

### I. The Selection of Activities

The program in physical-training activities requires a selection of activities and a school organization for teaching and administration.

#### *A.* THE NECESSITY OF SELECTION

From the great variety and enormous number of physical-training activities indicated in the fifteen groups on pages 16 to 19, a selection must be made for a curriculum of activities in the school. All cannot be used, and they are of unequal value in the education of children. Present attitudes in this selection vary greatly in different schools. They range from selections in which formal drills predominate to those in which the natural activities predominate; from those in which the old ideas of discipline, the correction of bad influences of the schoolroom, and ideas of keeping fit for school studies *alone* predominate, to those in which the newer ideas of the special and educationally essential values of natural physical-training activities predominate. This situation indicates the need for a scientifically valid selection and organization of a course of activities. The selection should be according to principles which will meet school conditions generally.

#### *B.* SELECTION BETWEEN THE THREE GREAT DIVISIONS OF ACTIVITIES

**1. Emphasis on the natural activities.** Each of the three great divisions of physical-training activi-

ties classified above has values; but the emphasis in selection for a curriculum of activities in the school to meet the needs of children and present-day social demands must be on the natural or big-muscle play activities. Four groups of reasons for this emphasis on big-muscle activities, may be enumerated as follows: (*a*) Relative values, (*b*) the interest of children, (*c*) the development needs of children, and (*d*) the attitude of teachers.

*a. Selection according to relative values.* The natural physical-training (big-muscle) activities are educationally more valuable than gymnastic drills. They give a certain development of intellectual, emotional, nervous, and organic powers not given in the same degree by any other kind of activity in child life, and it is impossible to gain the broad and more significant phases of these values through drills. A comparison of values makes apparent the greater importance of the natural activities.

*b. Selection according to children's interests.* The natural physical-training activities arise out of children's play tendencies. They are satisfying because they meet growth needs. These needs are not met by any other kind of activity. The natural activities are an essential part of child life. On the other hand, gymnastic drills or calisthenic movements are pure adult inventions. They are artificial or invented movements derived from the army idea of "training" and were incorporated into the school program in Germany and Sweden when formal discipline was in vogue. Any business, professional, or school man, who, conscious of the growing need of exercise, has attempted to take

morning calisthenics, realizes keenly the irksomeness of the task. The movements have no meaning or motive or interest except for the association with a desire for health or an idea of duty. They require will power in their execution and a consciously directed effort that is fatiguing. *These movements have less meaning for children than for adults, and children have less-developed will power or capacity for sustained effort.* They have less capacity to keep up meaningless movements for the sake of a remote need or an abstract ideal. The drills are more irksome to them than to adults. *They are adult activities, not child activities.*

It is frequently said that children enjoy drills. They *do* as a novelty, which is short-lived, and as a *relief from the necessary inhibitions and the depression of sitting still at a desk for long periods* (the most artificial thing a normal child can be asked to do); but this "enjoyment" is quite in contrast with the enjoyment of the natural play activities, as may readily be seen if children are given the choice between drills and play on the playground.

From the standpoint of children's interests alone the *emphasis* in the selection of activities must be on the natural.

*c. Selection according to the development needs of children in relation to the time problem.* (1) **The needs. The school's responsibility.** The needs of children for the nervous and organic development that is to be gained from physical-training activities are such that the maximum time allotment possible for the activities within school hours is insufficient. The school time for activities must be supplemented by time for

activities out of school. This indicates a selection of activities for teaching within school which will tend to go on out of school.

The average time per day required to gain essential results for efficient citizenship from big-muscle activities is enormous. It seems to be about as follows: For children of the elementary school age, it is between four and five hours per day; for children of the high-school age, or during early adolescence, it is between two and three hours per day; and for the college period or late adolescence, it is between one and two hours per day.

The contrast between these figures and those accepted in school tradition is apt to arouse skepticism, yet the figures are based on the tendencies in activities of children themselves, the experience of experts, the observations of large numbers of earnest parents and teachers, the accumulated data from many social and recreational surveys, and a mass of statistical and case studies of adult physical and mental conditions (determined seemingly by full experience or lack of adequate experience in big-muscle activities during childhood and youth). Though the data have never been amassed in one thesis for the information of educators, the indications of the facts are such that it seems unsafe to ignore them. Especially is this true since *the problem is relatively simple of solution.*

The needs of children for big-muscle developmental activities are quite different from those of adults. The period of rapid growth of the fundamental mechanisms and the metabolic functions, is the period for the development of all the latent resources in power for the

functions of life. After maturity the objective is to maintain the functional efficiency of the developed fundamental powers and to acquire relatively slight variations in new adjustments. *The needs of children in big-muscle activities are for development; the needs of adults are to "keep fit."*

This *time* problem has to do with the time that is necessary for big-muscle activities, if children are to reach maturity with that fundamental development of the emotional, nervous, and organic powers which seems essential to stand the strain of the functions of modern life. It does not involve a question of conflict in interests with other activities of the school curriculum. Child welfare demands that the school shall meet the problem with a solution somehow. *The solution is merely a matter of an intelligent organization of the relationships between within-school activities and out-of-school activities.*

The activities selected to be taught within school hours must tend to *carry over* by their own dynamic drive into the out-of-school play periods. During childhood and youth the only activities which will be carried on with intensity for any length of time are the play activities. These activities tend to be continued because of the pleasure they give. Formalized and artificial activities are fatiguing and particularly uninteresting after the novelty has worn off, and *they cease to go on as soon as adult compulsion is discontinued. Drills never impel children to spontaneous action. Children do not rush together spontaneously at recess or after school hours and start a gymnastic drill. But this is precisely what must happen from activities taught in school hours if physical education is to help produce citizens.* This fact

alone puts the emphasis in the selection of activities on the natural activities.

The relationship between the periods within school hours and those out of school hours will be considered under "II. Organization."

(*2*). **Fatigue and amount of activity.** Even if it were conceivable that all the time which children, under natural stimulus and satisfaction, normally devote to big-muscle activities could be organized within school periods, the children's developmental needs could not be met by formal drills. Within the limits of normal fatigue, development is in proportion to the intensity and the duration of the daily activities. In the joy of play the onset of fatigue is very slow, while in drills it is very rapid. *Drills exhaust children long before a small part of the time needed for development has been covered.* For development the dynamic drive of the natural activities is necessary. Therefore the emphasis in the selection of the great bulk of physical-training activities must be on the natural.

*d. Selection according to the teacher's function.* The typical teacher will go through conscientiously with any program set up by school authorities (even meaningless movements); and many individuals are so constituted mentally that they enjoy watching even rows of mechanically arranged children executing mechanical movements to command or in rhythm. Any group of human beings executing movements together appeals to the spectator's impulses; but this spectator's enjoyment has no necessary relationship to the child's life or education. Frequently mass calisthenic drills are organized for the enjoyment they give to the spec-

tator. The danger is that such drills will be organized with great labor for the teachers and loss of time for the children, not because of their educational value, but simply because they do appeal to the spectator. The same is true of marching. Many teachers also give drills because it is what they have been trained to do. They do not know how to do anything else and they are required to do something.

To the majority of teachers, however, all this is consciously a part of the *burden* of teaching, in the sense of driving children to do something they do not want to do. Yet physical training, of all the activities of the school curriculum, should carry its own drive and even contribute to the spirit of the school to the extent of lessening the requirement for discipline in other subjects. Properly organized, it does carry its own drive, as can be proved by reference to the organized physical-training activities on the playground. In direct contrast with anything that ever happens in artificial drills is the wide-awake, concentrated, enthusiastic, thrilling, joyous response of children at play under a trained teacher. The enjoyment-giving and life-giving service of the teacher are equally conspicuous. The activities are an inspiration to the children; the children's responses are an inspiration to the teacher. If consistent results are to be secured from the educational process, this joyous attitude the teacher must have; so it is worthy of consideration in the selection of activities. Teachers must live in the activities as well as the children.

**2. Place and selection of formal activities.** The formal activities include four groups: (*a*) the marching

and tactical activities; (*b*) the postural instructional activities; (*c*) gymnastic drill activities for postural correction, for "discipline," or for development, and (*d*) the special corrective activities.

*a. Marching and tactics* have a value and a place in the physical-training program, as illustrated in fire drills and in the need for handling children in groups or masses in school or civic functions or in teaching physical-training activities. These needs are specific and the training should be specified and limited. Marching and tactics have no "disciplinary" value except in developing *the ability to respond in mass and with precision to command*, and they have these values only where such specific responses have a meaning in the school and the social life of the community

*b. Postural instruction* is essential in proportion as children are confined indoors for long hours (which in itself is devitalizing) and compelled to sit in seats at tasks which tend to induce bad posture and depress nutrition. Good posture implies a standard way of sitting, standing, or walking. It is a product of neuromuscular strength and skill; hence it must be established in motor habits and supported by an ideal. The strength is a product primarily of strength-giving and nutrition-stimulating vigorous play. The skill is a product of ways that have been learned for assuming good posture. The habits are a product of properly adjusted furniture and constant effective coaching to help develop a habit and fix an ideal. Postural instruction should be distinguished from "postural" or "corrective" drills. The postural instruction should be an abiding thought (as should the teaching of all

ideals) in the mind of the teacher and the instruction should be repeated frequently. The drills can be given only at stated intervals even in the later grades. They should not be given at all during the early grades.

*c. Gymnastic drills* include the activities designated by such phrases as "calisthenics," and "setting-up exercises." They are organized from the standpoints of (*1*) *postural correction*, (*2*) "*discipline*," and (*3*) *development.*

(*1*) "Postural drills" have a limited value for children whose posture habits are poor. They are artificial ways of toning up muscles left weak by insufficient natural exercise and relaxed through bad posture in unnatural occupations. Real postural exercises are few in number and they are specifically selected to tone up the special groups of muscles involved in maintaining good posture. They should be organized for those who need them *and always in addition to the regular developmental activities.* The danger of these postural drills is that they will be given as substitutes for the large amount of nutrition-stimulating and strength-giving natural activities.

(*2*) "Disciplinary drills" are exercises executed to command with great precision. The traditional gymnastic exercises of this class are artificial, and the "discipline" in them is largely an exploded idea. It is confined to the responses in executing artificial stunts. Except for the ability to think and will artificial movements and the egoistic satisfaction in this mastery of the body, the "discipline" has no meaning whatever. The "disciplinary" idea in these artificial movements has no place in the school curriculum except as it is

identified with postural instruction and with the initiation or control of movements in developmental drills.

(*3*) Developmental drills are series of vigorous exercises initiated either by command or example and repeated rhythmically several times. They have a limited value in the later grades in that a teacher can organize large numbers of pupils, in a small space for a limited time, and thus meet the temporary needs for relief from sedentary activities or for exercise in inclement weather and under cramping conditions as to facilities. It may be argued that a little experience in these activities has a possible value for adult life in giving a technique which may be carried over as a means of exercise under conditions of sedentary life. Such an argument is easy of exaggeration and of doubtful validity. *Developmental drills should be organized only as bad-weather activities or as artificial substitutes for natural activities where it is impossible to organize the latter adequately.* The danger of these drills is that they will be organized as the real developmental activities instead of as artificial substitutes, or that they will be made the center of the physical-training program instead of a minor item or a convenience. The possibilities of realizing their limited values increases with the age of the children. They have no value in the early grades. Ten to twelve minutes at a time is the limit of their real value in the late grades, and about twenty minutes in the late high-school or college age. *Teachers are apt to give these exercises because they are easy to organize; but to get real results they are the hardest to teach of all the activities.*

*d. Special corrective activities* are movements or manipulations selected especially for their remedial,

physiological, or anatomical effect. As the term implies, these activities are for particular individual cases and require generally special skill in their application. The supervisor of physical education in any school system should have the elements at least of this special skill.

**3. Place and selection of related activities.** The related activities arise from the daily need of going from place to place, from the outing impulse, and the necessity for labor. These activities are important for physical-training purposes; but they are usually difficult to organize for daily systematic physical-training results, and they are one-sided in values.

*a. Walking* to and from school within reasonable distances should be systematically encouraged. But it should never be a substitute for play, which is apt to be the case in rural communities. Walking is fatiguing and low in physical-training value for children. For equal allotments of time, it gives very little of the values of vigorous social play.

The *outing activities* with all their "educational-recreational" features should also be systematically developed. They can be organized very systematically on week-ends and holidays, and should be so organized. They are extremely valuable to supplement and expand the more regularly organized natural activities.

*b. Work* also must be recognized. Vigorous hard work in the past has occupied a prominent and, in many cases, a dominant place in the physical education of youth. Today, however, few children have the opportunities to participate in real developmental work. Play, therefore, has become the dominant influence and for the majority of children the only constructive physi-

cal-training activity. Work cannot be organized by any flight of the imagination as a systematic physical-training procedure for all the children of the nation. And because of the influence of machinery on work, and its specialization, very little of the work children have to do, even on the farm, has any developmental value. It lacks especially the values for organic development, and the values which come out of the social discipline of vigorous play. However, when real developmental work comes into the experience of children, it is so much to their advantage. It should never exclude, however, the free exercise of the instincts and emotions in the big-muscle, social play.

### *C.* ADAPTIVE SELECTION

Physical-training activities must be selected according to natural principles of adaptation to the incentives, capacities, and needs of each age period, with sex differentiation and individual differences taken into account. The selection is adaptive, and it must be determined by continuous educational research.

1. **Age adaptation.** The adaptation of activities to *age periods* requires a selection according to *age tendencies, capacities, and needs.* This gives a selection according to the principle of progression in age incentive, capacities, and needs. The selection may be very precise and scientific. Age adaptation requires (*a*) that the activities shall be selected which are most characteristic of the natural tendencies of the age. They should be the activities which tend to arise spontaneously. They should tend to go on irrespective of adult organization. This is not a question of what it

is possible to teach children. For example, specialized teaching can produce prodigies in any activity; but it is not advisable to attempt this with many children. Further, there is always a tendency on account of adult criteria to shove down the activities of adults and of older children into the lower age periods. Again, age adaptation requires that the activities shall be analyzed, and those selected (*b*) which best suit the natural capacities of the age in strength and skill, and (*c*) which best suit the need for a full and proper stimulation of the nutritive functions within the limits of fatigue. In a word, the activities must be selected for the best educational results in each age — mentally, nervously, and organically. A selection according to these criteria will give a thoroughly scientific curriculum of natural physical-training activities. No formal activities should be selected for general use in the early age periods apart from postural instruction and simple marching for fire drills or for school needs. In the later grades they should be selected only to meet individual needs and artificial conditions.

2. **Sex differentiation.** Sex differences within age periods after approximately ten years of age demand a *differentiation* in the adaptive selection of activities for boys and for girls. Previous to ten years of age boys and girls naturally engage in the same activities and no general differentiation in the activities is required. But with the beginning of pubescence, important differences in capacities, if not in incentives and needs, begin to appear, and these divergences become more conspicuous with years. A special selection and adaptation of activities according to sex differentiations is therefore

necessary. Considering the training of teachers in general, the safest time for this division of the sexes (even if then still engaged in the same activities) is ten years of age. Playing together after this age has social values for both boys and girls, but the more vigorous types of play should be organized only by the skilled teacher or supervisor.

3. **Individual adaptation.** Finally, individual differences within each age period require a further selection and adaptation of activities according to *individual needs, capacities, and incentives.* Individual differences are apparent from birth, but, except for children who have organic lesions, who are crippled, who are excessively fat, or who have other special handicaps or needs, it is not necessary to make many individual adaptations previous to nine or ten years of age. The great mass of children need a large amount of joy-giving vigorous play, and if this is provided the slight variations in strength and skill will take care of themselves. This assumes, however, *the attention to the individual* which is supposed to be given to all children in the teaching process. Any maladjustments due to fear or social timidity, or any wrong attitudes created by previous unfortunate experiences may require special temporary adaptations of activities as a teaching and learning expediency. Children who have special organic or structural handicaps should have special adaptations of activities. These must be determined usually by a physical examination and should be handled by the expert or the supervisor.

After the age of ten years, approximately, it becomes increasingly important to have children classified for

big-muscle activities according to individual needs, capacities, and incentives and to have activities adapted accordingly. This need for the individual classification of children and the adaptation of activities is due to the fact that the bad effects of home and school life and of neglect of training are cumulative; and that interests arise and develop into ambitions in the more complex strength- and skill-demanding activities. Participation in these vigorous activities should be determined by individual fitness or capacity to enter them with good educational results. The basis of this determination is the physical *examination for fitness* or capacity. This is an educational examination and should be kept distinct in thought from the health examination, though the two examinations may be given at the same time. The distinction between the examinations lies in the fact that one is for the guidance of the teacher in leading physical-training activities, while the other is for the control of growth handicaps or for "health supervision," which will be considered later. This special adaptation of big-muscle activities to the needs of individuals can be handled only by the expert supervisor of physical education.

### *D.* EVALUATION

The activities which have been adapted to age incentives, capacities, and needs with a sex differentiation, and to individual differences in capacities and needs, exist in great variety and they differ in values for the various objectives of physical education. They should be evaluated in detail, and should be selected accordingly.

### *E.* PRACTICAL SELECTION

Finally, the activities should be selected according to local conditions as to physical and social environment, the season, available facilities, and the talents or training of the teachers. The selection and organization of activities may well differ strikingly in a school in the mountains and one on the plains, in winter and spring, in a hot and a cold climate, on the desert and near a lake. There is no conflict between this practical selection and the general laws of adaptation. In a word, the selection and organization should continue from the broad problems down to the last detail of the practical daily conduct of the activities by the teacher. The broad problems are the task of the expert; the detailed selection and organization is the task of the teacher, with the help of the supervisor.

## II. Organization of the Program in Physical Training

The success of the program in physical training depends as much on its organization in the school as on the selection of the activities. It depends especially on the teaching and administrative attitudes toward its organization. Further, the success of the other programs or sub-programs in physical education (to be described later) depends on the organization of this program in physical-training activities.

The *problems in organization* may be indicated by an analysis as follows:

### ANALYSIS OF THE TEACHING SITUATION

In every teaching situation there are five elements which create five special problems in teaching and in management (or administration). They are: (1) the teacher or leader, (2) the child, (3) the activity, (4) the place, (5) the time. These may be put into an educational formula as follows: Every teaching situation involves (1) the leadership, (2) of one or more children, (3) in some activity, (4) at some place, (5) at some time. Even in the simplest teaching situation where only one child is being taught for a moment, as in answering a question, or in admonishing a child, all these elements are present. Where the number of children, the number of activities taught, the number of periods, and the number of places under a teacher increase, the relationships between the elements become complicated and there arises the problem of "schoolroom management," or "school management," or what will be called here *managerial organization* or *leadership*. Where the number of units, as rooms, schools, or playgrounds, each with a number of teachers, increases, the management expands into the problems of an overhead administration. For the administrator, the elements in the teaching situation become (1) the employment and supervision of teachers, (2) the classification and grading of the children, (3 the organization of a curriculum, (4) the construction, purchase, and care of the school equipment, (5) the organization of a schedule. The teacher, therefore, even in the simplest teaching situation, is dealing with the elements of school management and administration.

Each of these elements requires separate considera-

tion for teaching or for administration. And the teacher in the practical process of teaching must correlate all the elements as a working whole. The attitude and the problems in organization of the physical-training program are outlined below.

### *A.* THE FACILITIES

The *place* for the activities refers to the school opportunities in space and equipment for physical education. These include the classrooms, the hallways, the school yard or playground, the gymnasium, the swimming pool, the dancing floor, or any place or equipment which may be used for big-muscle activities. These facilities may be very limited or very generous. The important point is the principle involved in the administrative attitude. *A program of physical education which is confined to the limitations of the classroom is not educationally defensible.* The activities should be out of doors in all but impossible weather; and this requires an adequate playground. Adequate indoor activities require a gymnasium floor. The gymnasium floor should be considered a bad-weather institution or a necessary substitute for outdoor facilities in congested districts. These statements refer to the controlling administrative educational doctrine, not to local conditions as to facilities. School plants built according to past conceptions of school functions cramp every newer phase of education. Nevertheless, out-of-date plants will determine, to some extent, the school organization of physical education; but to accept the cramping of child life as inevitable is professionally indefensible in a democracy. The teaching and adminis-

trative attitude toward proper facilities, and the proper use of such facilities as there are, should be dynamic and insistent. The criteria for proper facilities may be illustrated by reference to the situation on the playground.

The school yard or playground always has been *a* play space during recess, but until recently it was seldom planned, equipped, or organized as *the* community play center for use not only during school hours and intermissions, but also before school, after school, and on Saturdays and holidays. Sufficient evidence of this is seen in the inadequate size and miserable equipment of old school grounds. A new attitude is necessary because society has destroyed for most children the opportunities for social physical-training activities at home and in the home community, and few parents can afford to supply these opportunities. Still fewer parents know how to organize the activities. Rural children are isolated. The physical training opportunities must be supplied as other essential educational opportunities are supplied; i.e., by the school.

People are becoming accustomed to think of the necessity of playgrounds, but usually of the widely promoted municipal type. Isolated playgrounds for school children, apart from the school, are obviously a misfit. The children are required by law to be at school a large part of the year; they are required by law in many states to have physical-training activities; and they play before school, at noon, at recess, and frequently after school. For these activities playgrounds, equipment, and leadership must be supplied. Further,

the schools are located by the school administration as conveniently as possible for all the children of the community. The remote municipal playground, on the other hand, can be used by school children only after school and on Saturdays and holidays. Its use requires a trip to another center than the school, with additional worries for parents; and it serves effectively only those children within a quarter-mile radius of it.

Obviously, *the natural place to organize the community opportunities for children's physical-training play is at the school, on an adequate school playground.* To set up sufficient municipal playgrounds apart from the school, properly equipped and supervised to meet the needs of all the children of each community and in duplication of what the schools must have, might bankrupt a city. The school playground must become the community center for the child's physical-training activities. It must be the extra-home institutional center set up by society for the education of all the children. This requires a *new emphasis in attitude* toward the school playground and other physical-training facilities. *The school must represent society's organized opportunities for the children to get an education through essential activities that cannot be organized by the home. The same argument holds for gymnasium floors and swimming pools with necessary dressing rooms.* The argument, however, does not militate against the establishment of municipal playgrounds, athletic fields, and natatoriums to meet the needs of the older boys and girls beyond school age and of young men and women. It only goes to show that the community playgrounds for children of school age should be at or around the school.

Old school plants with small or inadequate playgrounds, where the location cannot be changed, must of necessity depend on large gymnasia. These should be provided even if the buildings have to be reconstructed. Physical education cannot succeed without facilities, and the retarded physical development of children cannot be "made up" like a deficiency in an academic subject.

The general criterion is: Are the school facilities for physical education in natural activities such that all the children in the community, of all school ages, can find the opportunity for their community play during play periods?

### *B.* THE ORGANIZATION OF THE TIME ALLOTMENT

The *time* needs of children for physical-training activities and the influences of adult social conditions on play out of school demand that the time needs should be guaranteed, in so far as possible, by the school. This requires an adjustment in the organization of activities, between the time allotment and teaching within school hours, and the time naturally devoted to the activities out of school hours.

The periods before school, after school, at noon, and especially at recess, have always been physical-training periods. Children naturally use them for big-muscle activities. They have been supervised to some extent, and occasionally the activities for these periods have been definitely organized by teachers. Yet nothing is more striking in the present-day school than the ineffectiveness of these play periods for the majority of children unless the children have come under the

influence of an adult play leader. It is important, under present-day social conditions, that the periods should be recognized for what they are, as physical-education periods, and that they should be definitely utilized to be effective as such, and thus add to the results in education and to the children's enjoyment as well. The time is too valuable to be wasted by "fooling," as it usually is under present-day conditions.

The in-school and the out-of-school time should be organized on the following plan: The time allotted within school hours should be regarded as *instructional* or *teaching periods*, and the time available out of school hours as *play, athletic, or training periods*. This suggests an *organization* for school conditions, in which the learning and the practice inherent in children's play are divided and the bulk of the practice put outside of present school periods. The instructional period within school hours should be devoted primarily to *teaching* those activities which will tend to go on spontaneously during the play or athletic periods. The play or athletic periods cover the time before school and after school and during recess and the time devoted to big-muscle play on Saturdays and holidays. These periods naturally devoted to big-muscle activities should be organized for the larger training in the activities, to secure their cumulative educational results. *At least part of the total play time out of school should be organized to establish worth-while big-muscle play habits. Only as these two classes of periods are looped together by organization can the time and therefore the physical education necessary for citizenship be secured.* They should function as one. Associated with these two main

periods there should be several two- or four-minute between-class *relief periods* to counteract the detrimental influences of desk and indoor life, and such *special corrective periods* as are necessary for individual cases.

The general criteria should be: Do the activities taught in the instructional periods go on in the play periods; and are *all* the children definitely organized for a part of the playtime in selected and evaluated activities?

### *C.* THE PLAN OF ACTIVITIES

If physical education is to be a success, the natural physical-training activities must be recognized as *educational* activities; and *they must be organized on a plan which will secure their inherent educational values.*

The natural activities should be taught within school hours so that they will flow over into the children's play periods and there be organized to mold skills, habits, and attitudes for recreation all through life. These activities have gone on in the past by the drive of the children's own play impulses. They have been considered by adults under the sway of traditional prejudices as of little educational value and frequently as "just play," "fooling," a "mere excess of steam," or "a necessary evil." These prejudices have persisted as the survivals of old exploded philosophies and especially on account of the ascetic contempt for the body and the Puritanical fear of play. Consequently the play activities have not been considered essential to education, or an essential function of the school. Now that science and experience have proved the values of these

activities and social conditions have made them part of the school function, the traditional school attitude should be changed to one of earnest solicitude for their proper organization.

The activities require a *plan of organization* for teaching, which is in addition to the selection, adaptation, and evaluation outlined above. The plan should (1) cover both the instructional and the play periods, (2) meet the abilities of very inexperienced and unskilled pupils, as well as those highly trained, and (3) give the basis for organizing incentives for achievement.

The plan should be centered in an organization of *individual events* selected from most or all the broad groups of natural and related big-muscle activities. By individual activities as used here is meant those activities in which each individual carries on the whole activity by himself without dependence on the activities of others. The advantages of individual activities are as follows: (*a*) The activities can be organized equally well in the instructional period or play periods; (*b*) they can be practiced (when learned) by individual children themselves; (*c*) they can be engaged in by the individual or by a social group; (*d*) they give the best physical-training results because each individual is active all the time, or active in turn, and gets all the benefit of each activity; (*e*) the activities can be graded progressively to each pupil's needs or to the needs of small groups of pupils; (*f*) each pupil can be taught or observed as an individual and each can progress as an individual; (*g*) the activities can be organized by the average teacher, anywhere, under any conditions.

A large part of physical-training activities are of this

individual nature.[1] Those that are not individual can best be learned or taught by individualizing them. Team games are the best illustration of this. These team games are the great standard big-muscle play activities of late adolescence and early adult life. Because they are ball games and competitive, they are the most stimulating activities after nine or ten years of age. But, usually, children between nine and fourteen years of age, and frequently older children, do not have the strength or the skill to play these games effectively in the school time available, or under school conditions, and get educational results out of them. This is especially true of girls. Most of the time in the game is wasted through the awkwardness of mates or opponents. The games, however, can be modified to meet the plan *by making individual contests out of the elements of the games.* By devising contests based on the characteristic *elements* of each game the ball and the competitive features are retained, as, for example, throwing the basket-ball for goals or throwing a baseball for strikes. Such events give very stimulating educational athletic activities for the younger 'teen or inexperienced children. These individualized events give a rapid development of strength and skills for the standard games and, together with track events in running and jumping for boys, should form the great bulk of the educational athletic activities.

These individual events, selected from several of the

[1] All the self-testing activities or stunts on the apparatus or floor except the advanced "two- or three-brother acts" and pyramids may be classed as individual events. So may be classed all track and field events, combative activities (though an opponent furnishes the resistance), most of the water and winter activities, and many of the folk games.

groups of activities, should be conceived of as a broad circle of *developmental activities* in as many arcs as there are groups of activities. Out beyond this circle we may conceive of a broad expansive circle of activities containing as many arcs as the first, in which lie the *standard recreative activities* of the later adolescent years. We may further think of a small circle in the center containing a selected group of ten key activities representative of the developmental groups and through them of the standard activities, which ten key activities may serve as a test of progress or a scale of achievement. This gives a natural test of achievement in a natural program of activities.

The individual developmental activities should be organized both in the instructional and the play period. They develop strengths and skills for the standard activities, and develop the incentives to participate in the latter. The standard recreative activities should be organized for the inexperienced or unskilled, as a stimulation and a broader range of practice, only in the play periods. For the skilled, the standard activities in their complex form should be organized in both the instructional periods and the play periods. The tests of achievement as individual events are themselves practice events and can be practiced by children at any time. Children will keep their own *achievement records* on pupil score cards. Official tests of progress should be made two or three times a year.

This plan (of individual events as developmental activities leading to standard events, and the related test of progress) is so simple that it lends itself to a broad range of adjustment to local conditions. It can,

with a little instruction, be handled by a rural teacher with few facilities, and it will serve as an inspiring organization for a city system.

### *D.* ORGANIZATION OF CHILDREN

Children must be *classified* (1) by incentives, capacities, and needs, and (2) for teaching or leadership.

As suggested under the heading "adaptive selection," children must be classified according to age incentives, capacities, and needs, with a sex differentiation. The usual school organization does this in a rough way. Children should also be classified according to individual needs, capacities, and incentives. They should be examined periodically to discover those needing special individual attention. The physical examination to determine capacity to enter into activities can be given only by an expert; so the classification according to individual needs should be made by the supervisor for the ordinary teacher. Any teacher, who will study the process, can learn to give the achievement tests.

Children must be organized also for teaching during the instructional period and effective practice during the play or athletic periods. In play periods they tend to organize themselves. But aggressiveness and selfishness on the part of some children and fear of physical injury or social timidity, awkwardness, and inexperience on the part of others, make the natural classification very unsatisfactory. A few usurp all the facilities. The rest are relegated to ineffective activities or none at all. Contentiousness and the large numbers concentrated on small playgrounds exaggerate these tendencies. To overcome them *children should be*

*classified in small groups and each assigned to definite facilities at a given time and organized in selected activities under a group leader.*

The nature of the activity being taught or organized determines largely the necessary groupings of children. For individual events, groups of five or six under their own leaders give the best working organization. After nine or ten years of age, children should be organized for competition by weight, or by age-height-weight. They should also be organized in a permanent team or club. These groups are the basis for group social achievement and for the discussion of problems.

### *E.* LEADERSHIP AND TEACHING

Leadership or teaching has several levels of emphasis.

1. **The managerial organization.** The teacher must work out a coördinated teaching organization that takes into account each of the five elements in a teaching situation outlined in the introduction to this section (page 69). In physical-training activities this managerial organization is very conspicuous — more so than in most school activities. In classroom subjects like history, for example, the managerial organization is simple; the technical teaching is conspicuous. In formal physical-training activities the managerial organization is somewhat more complicated, since these activities require marching maneuvers; but in the natural physical-training activities the managerial organization becomes more conspicuous than the technical teaching. This difference in emphasis may be understood by thinking of the organization of children according to the formation required, in small squads

for individual events, or in teams under captains. *The teacher must visualize groups or teams of children under their own leaders, in different activities, in different places with facilities, at different times, and see or think a complete shift or change in this arrangement frequently and without loss of time.* The process is very simple when understood. It is an organizing leadership.

2. **The organization of incentives.** Incentives must be organized. Children tend to play; but, as shown above, their play tendencies are frequently thwarted or rendered ineffective by adult social influences, school demands on time, parental ambitions in other activities, and the difficulties of organizing large numbers in the schools. The tendency may result in mere fooling or in highly educative activities. Therefore *the tendencies must be built into habits.*

For little children the organization of incentives requires no more, usually, than the opportunities offered by the managerial organization; i.e., facilities, companionship, time, and leadership.

After the age of nine or ten years, however, the conflict in social pulls and the drag of neglected physical condition require that the natural tendencies in the activities shall be organized, developed, and established as habits. The social drive of rivalry and also the desire for objective symbols of prowess and skill become progressively more influential. Hence it is important to organize activities that give social satisfaction, to recognize the rivalry in contests, and to *set up tests of achievement in a point system by which all the activities may be scored.* A point system is the natural means also of preventing too great specialization

and of coördinating the values of several different kinds of activities like stunts, games, and outing activities. *It is the basis for a natural scale of achievement and thus it enables the individual to compete against himself as well as against his mates.* The word *achievement* becomes a correlating center representing both a process of accomplishment and an ideal.

3. **Technical teaching and supervision.** Physical-training activities require both technical teaching and a broad leadership. The technical teaching situation arises when a problem must be solved in a new coördination as in learning a stunt or a new dancing step or the handling of a ball, or in learning a new element in the rules or the strategy of a situation. This technical teaching is at first specific; it then becomes a critical supervision in practice. Thus technical teaching should be emphasized in the instructional periods and flow right over into the play periods. This requires a modern attitude toward the leadership of play. The traditional American attitude was to rebel at the idea of teaching play. But baseball, swimming, boxing, and even the most traditional games of little children have always been taught. These activities must be learned as other activities are learned. In the past this learning for most children came about through the older and more experienced children teaching the younger and less experienced. Adults took an active part in it. But as civilization has specialized adult life, as the school organization has classified children by grade and sex, and as the physical-training activities have been elaborated, systematized, and perfected for educational ends, the incidental transmission from older to younger

is no longer effective. The teaching requires an adult. An effective physical education cannot go on without adult leadership.

Technical teaching changes to critical supervision; and critical supervision again gives way to technical teaching. During the play periods in the gymnasium or on the playground, when a going organization has been set up, — i.e., when the children are in groups in their chosen places, in their own activities, under their own leaders, — the teacher's function is to be present as an observer, coach, umpire, source of appeal, judge, or final arbiter to keep the organization going educationally. It will be seen from this discussion that the word *supervision* is used in physical education and play organization with four shades of meaning, ranging from technical teaching through the control of a play organization with and without teaching to a mere care and protection. All these phases of leadership are necessary for the proper educational direction of children and youth. There is no conflict between supervised and so-called "free play." Play should always be supervised. Free play is a product of an attitude of mind. It may be the product of fleeting impulse, or it may be highly organized under an adult leader. Where there are large numbers of children there can be no free play unless there is democracy, and there can be no democracy on a playground or in a gymnasium without an organization under adult leadership.

**4. Class discussion.** There should be class discussions about the problems in the physical-training activities. Such discussions are quite common for the few boys and girls who are members of interschool

teams. The practice should be extended to all children. It is essential for a well-organized physical education. The class discussion should cover such problems in the activities as groupings of children and the election of leaders or captains, the time of practice and use of facilities, the planning of schedules, the methods of keeping records in a point system to relieve the teacher of clerical work, and the assignment of problems to committees or captains. All these problems should be settled in the quiet of the classroom. The less discussion there is during the instructional or play periods, the better. These periods should be for practice, not talk. The discussions give the teacher the opportunity to lift the practice of the instructional and play periods to the level of general ideas and intelligent attitudes. It is also the basis, as will be shown in other programs, for a correlated discussion of hygienic, moral, and similar problems which arise in connection with the activities.

### *F.* SUPERVISION AND ADMINISTRATION

It must be assumed that the elementary class teacher in most schools will conduct the physical-training activities. None of the rural schools and few of the smaller city schools will be able to have a special teacher. Many teachers, however, have not been trained for this leadership as they have been trained for the older subjects of the curriculum. Some have not even had earlier experience in the activities. Nevertheless it has been demonstrated in states where physical education laws have been passed recently, that the average earnest elementary teacher can

conduct the activities with success if a supervisor provides three helps: First, a syllabus giving a detailed list and description of the activities and their organization by grades must be supplied. Second, the teacher must be taught to use the syllabus so that it will give the ability to organize and lead the activities, even if personal skill in performance cannot be acquired. Third, the supervisor must set up the preliminary managerial organization, test and classify the children, plan the schedule and use of facilities, and show the teacher how to conduct this managerial organization and how to draw out the ability that some children have for demonstrating activities before other children.

The supervisor should be an expert on these educational problems; the elementary teacher cannot be.

In large school systems a special administrative officer of physical education is necessary. This officer, to administer a physical-training program which will meet the demands of the time, must be trained to perform the following functions:

1. Select and judge activities for their educational values.
2. Examine and classify children as to capacities and needs.
3. Teach the teachers and supervise their teaching.
4. Plan, construct, and equip school gymnasiums, playgrounds, etc., and administer their upkeep.
5. Plan the schedules in physical education.

These functions refer specifically to the physical-training or developmental program. Other administrative functions in the moral-training, hygiene-teaching, and health-control programs will be considered later.

## SECTION II. THE PROGRAM OF TRAINING IN CHARACTER, MORALS, AND MANNERS

I. Character and moral training.
   *A*. Basis of the program.
   *B*. The range and importance of the program.
   *C*. The content in moral situations. Illustrations.
   *D*. The procedure in organization and leadership.
      *1*. The managerial organization.
      *2*. The organization of incentives.
      *3*. Technical teaching and supervision.
      *4*. Class discussion.
      *5*. Supervision.
II. The program in manners or courtesy.

## SECTION II. THE PROGRAM OF TRAINING IN CHARACTER, MORALS, AND MANNERS

### I. Character and Moral Training

Physical education has a fundamental responsibility in character and moral training. This is due to the nature of the activities it organizes and leads.

#### *A.* BASIS OF THE PROGRAM

All activities both in school and out of school have character and moral-training values. All are expressions of character in some degree. All present moral situations that require moral responses at least occasionally. The moral training value of each depends upon instinct mechanisms and what emotions it exercises and the opportunity it gives the group leader to direct the response tendencies according to moral standards.

The activities out of school are centered (*a*) in the domestic life of the family and other adult adjusting activities, (*b*) in the spontaneous exercise of capacity in play, (*c*) in the play and education organized by other agencies than the school and home, and (*d*) in labor for economic gain, in the cases of some children.

The play life of children in its various forms has always been recognized as a powerful moral force. The anxiety of earnest parents about the companionship of their children illustrates the point. Play gone wrong is the source of most of the bad habits known to childhood and youth. The tendency to play may drift into the most vicious activities or into the most valuable

of moral activities. Play is nature's method of education, but nature did not standardize the quality of play. The standards must be supplied by adults. With the progress of the modern spirit toward children in America and the reaction against the ascetic and Puritanical attitudes toward play, *all* forms of play are coming under a natural adult leadership; and the activities are being expanded, elaborated, and refined for better educational results. This is conspicuously true of physical-training activities, as suggested in the previous sections.

Big-muscle play, or physical-training activities, are primarily of the play type. The artificial physical-training activities occupy a relatively restricted and insignificant place. The values of the natural activities for character and moral training, as shown under the section on the objectives of physical education, are very great. It was shown that the activities are the spontaneous exercise of the most fundamental instincts and emotions in human nature; that the activities express fundamental character traits and thus develop them; that the development is inherent in the nature of the activities; that the form of expression determines the quality of character traits developed; and that the quality of the expression can be determined by leadership. It was shown that physical education must set up standards for the proper habits and attitudes (which should be the outcome of a leadership of the activities) and formulate the teaching procedure to build the habits and attitudes.

The objectives of physical education in character and moral training are to guide the development of

certain fundamental response tendencies according to standards and to establish the capacity for self-direction according to standards.

### *B.* THE RANGE AND IMPORTANCE OF THE PROGRAM

The *range* and *importance* of the character and moral-training program in physical education as a laboratory program and as part of a general school program in moral education is suggested by the following facts:

*a.* The activities begin in infancy and continue on into adulthood.

*b.* The time spent in the activities each day throughout the year is naturally great, and this is in keeping with fundamental growth and educational needs.

*c.* The activities are common to all children irrespective of mental type. The moral training that inheres in them does not depend upon the child's intellectual capacity to get ideas or inspiration out of books.

*d.* The activities reveal character in a concrete form, both to the teacher and the participant. They are a constant concrete expression of fundamental response tendencies, habits, attitudes, and moods. They also reveal, through physical condition, secret habits. The teachers can *see* the working and the results of character traits and so have a basis for leading the practical habit-building behavior.

*e.* The children's desire for leadership in the activities is so spontaneous and their need for leadership is so fundamental, that the teacher who enters into the spirit of the organization of the activities has great power.

*f.* The incentives to the big-muscle activities are so fundamental and participation in them is so enjoyable, that interest can be led on to a point where children will submit to a severity of moral discipline willingly and with a coöperation that is not excelled or even equaled in any other activity in early life.

### *C.* THE CONTENT IN MORAL SITUATIONS

**Illustrations.** The *content* of the physical-training activities for character discipline and moral education may be suggested by several illustrations of moral situations which arise out of the activities.

*a. Courage* is expressed in three forms of situations in physical-training activities. The big-muscle activities are all originally self-testing stunts and they are all vigorous or violent. They impress children with the possibility of getting hurt. This is shown in the tendency to stump each other, to dare and to take dares. Under proper leadership, there is little excuse for any injury of consequence; but children feel the necessity frequently of "screwing up" courage. Under any conditions there are the hard body contacts, the bumps, and slight abrasions. These are met with fortitude in proportion as the "indifferent" attitude is developed. The situation gives the opportunity to develop the satisfying courageous motor response along with skill and achievement.

To the socially timid child, the social organization of a mass of children at play is awe-inspiring. This awe frequently results in withdrawal by the child from all vigorous play. The leadership of timid children is often a delicate task. They can be and should be led on to

the effective social confidence which is essential for development.

The violence and aggressiveness of the skilled and experienced children arouses fear and a feeling of helplessness in many inexperienced children. This frequently destroys a natural unfolding of ambition and inhibits progress in achievement. The situation requires individual guidance in activities until a spontaneous participation with the groups is established.

*b. Taking turns* presents a moral situation with a moral issue. Facilities are usually limited; some of those available are better than others. Each child wants his chance — his education depends on his getting his chance. In opposition to this, there is the primary human tendency for the aggressive or skilled to usurp what facilities there are, or the best of them, and use them selfishly, to the disadvantage of others. Taking turns is a primary expression of justice. It applies to groups of children and on ball fields, as well as to individual children and on pieces of apparatus. The proper responses to the morals and the courtesy of taking turns can be built into fine habits.

*c. Rules of the game* are limitations on the mode of procedure in achievement. If they are obeyed they limit the means that may be used to win; but honor requires obedience to the rules. If they are disobeyed one gets an advantage, but it is more important to be honorable than to win. Rules, then, call forth responses to moral situations. Rules *exercise* honesty and fairness, in social competition. The habits and attitudes about fair play developed on the playground may be vicious or of an inspiring quality.

*d. Manners* are an exhibition of character traits as well as of familiarity with social usages. The usages are treated in the program on manners. Here it should be emphasized that the attitudes lying back of the forms of address and response to companions in all the social relationships of the activities are exhibitions of character traits and moral attitudes. They give the leader an opportunity to interpret social dispositions of individuals and their results in social relationships. The responses can be led on to build fine habits and attitudes.

*e. The expression of the fighting tendencies* is an essential element in all contests and combative activities. In addition to the primary expression in the contest, there may also be an expression in jangling and contention, even to the destruction of the play by a real fight. On the other hand, the expression may be confined to hard exercise of the fighting mechanism, and this gives all the stimulating satisfaction of a real fight without any of its disagreeable emotions or consequences. To exercise the fighting mechanism without loss of self-control requires self-discipline; and habits of self-discipline can be built by the leader even among the crudest boys and girls.

*f. The expression of egoism* is conspicuous in physical-training activities. It may spend itself in wholesome self-testing, in achievement, in strength and skill and in normal ambition in competition, or it may take the form of showing off in an unwholesome manner and later in "grandstanding." The exhibition of the tendencies are concrete. They give the leader the opportunities to cultivate wholesome egoistic ideals.

*g. Eligibility* presents a moral situation. There must be a classification of children to secure fairness in competition. A superior individual in a lower classification has an advantage, and a team with a superior player has an advantage. Thus, there is a tendency to try to win by violating the classification. This is the problem of *eligibility*, and to maintain fairness in competition, "eligibility" must become an ideal. In essence it is a moral problem. Regulations help, but honor alone prevents a violation of eligibility rules. The eligibility rules are the source of a constant moral struggle.

*h. The spectator* creates a moral issue in the social organization of a group or team. When a social group or team becomes conscious of the spectator and organizes its activities or contests for the enjoyment of the spectator, the tendency is for the spectator, if the activity is interesting and the group skillful enough, *to turn on the group organization and demand that it shall be organized primarily for the enjoyment of the spectator*. The spectator, then, comes to dominate the social organization of the activities, their management, and objectives. This is the source of the American interschool athletic problem. Spectator athletics tend to break down amateur athletics and substitute commercialized, professional athletics. This is the tendency in all sports. If the spectator is recognized, there is a difficult balance to be maintained. The tendency to cater to the spectator presents a moral problem in organization. It tests the leader's and the pupils' loyalty to the ideal of a purely educational or play organization; i.e., it confuses the problem of amateurism.

*i. The tendency to specialize* presents still another moral situation. Children are prone to *specialize* or to become habituated to inadequate or poor activities, the inducing factors being, for example, a lack of facilities for a broad range of activities, an all-absorbing interest in some satisfying activity like dancing, or a dominating tendency to gain skill to show off or win in competition. There is an incompatibility between the children's specialized interests and their need for many kinds of activity to develop varied talents or abilities. Too early or too great specialization at any age before maturity is a disadvantage. There is a moral problem for children in the choice between specialized enjoyment and fulfilling an obligation to the future self. It is a problem of indulgence versus regard for ultimate personal welfare. For the teacher the tendency to specialize emphasizes the need for organizing a wide range of opportunities in activities, but still more the need for a leadership of incentives in the activities.

These and many other situations give the "material" for character and moral training in physical education. They are the situations that constitute the basis for a laboratory program. The problems in the situations are inherent in the activities. The solution of the problems should be carried over into class discussions where the ideas and ideals gained should be generalized.

### *D.* PROCEDURE IN ORGANIZATION AND LEADERSHIP

*The procedure* in character and moral training in physical education should naturally be very practical and it is susceptible of a high degree of organization.

In this organization the children themselves, if properly led, will supply the drive and critical judgment.

1. **The managerial organization.** The managerial organization of the physical-training activities (as discussed under the organization of the physical-training program) must be set up from the standpoint of character and moral training. Character and moral training require standardizing criteria for considering the organization of the educational process which goes on in the physical-training activities. These criteria have to do with the process from the standpoint of moral responses required in the activities. The selection and organization of the physical-training activities must be made from the standpoint of their values for moral training as well as for the development of motor volition, nervous and organic power. The activities should be selected and organized as *opportunities* for character and moral training in a laboratory of moral action and thinking.

2. **The organization of incentives.** Children tend to set up standards in the form of rules and customs to control their own moral behavior in activities. They have, however, no native tendency to respond to adult moral standards except as these satisfy a need in their own lives. Therefore the tendencies to self-discipline in character traits and to self-direction according to moral standards in their own lives should be organized and led on to a conscious self-direction according to adult moral standards. There should be a guidance in judgment about moral situations.

Character traits and moral habits and attitudes as expressed in the big-muscle activities can be scored

under a point system. The several elements in moral behavior in this point-scoring procedure can be set up under the correlating word "sportsmanship." Sportsmanship becomes a slogan. Sportsmanship may thus typify for children the elementary principles involved in nearly all morals. The enormous use of the nomenclature of play, including such terms as "play the game" and "fair play," in current press discussions of business, politics, and war indicates the fundamental moral nature of sportsmanship. Sportsmanship has to do with the spirit of the game, a fair chance, honesty in obeying the rules of the game, honesty in the classification or eligibility for competition, and loyalty toward the social organization. Thus *sportsmanship* as a correlating word indicates a process of conforming to standards of justice. It is an ideal. In this sense sportsmanship is the Golden Rule applied as the ethics of play.

The habits and attitudes involved in sportsmanship can be classified under a list of headings and scored along with achievement. This scoring makes the judgment of moral traits visual and concrete. However, the value of scoring moral behavior depends on whether the children have thought out the requirements and adopted them in their social relationships and are striving to conform to them. The scoring is a concrete step in developing a personal self-respect that makes behavior conform to adult standards. The teacher, through the children's leaders, can develop the natural tendencies until a social spirit is established which is a source of group pride. Giving the correct responses should be made the fashion — the popular thing to do.

**3. Technical teaching and supervision.** In the practical leadership of physical-training activities, the character discipline and moral teaching should be as conspicuous as the teaching of the motor technique. The discipline, instruction, and critical supervision are important; but the organization of a moral self-direction among the children is more important.

Standards should be set up and maintained. The moral situations need interpretation according to moral standards, and the acts should be judged right in the heat of the activity by the teacher and, after some experience, by the children or captain. There should be a great deal of incidental teaching or coaching — a constant critical oversight. Judgment on the incident should be very systematic. This judgment of the moral quality of the act, in the midst of the experience, is the keystone of the laboratory method in moral education. The children's interest in the activities and the desire for adult leadership is the source of the teacher's unique disciplinary power. The power of this discipline is well recognized in the high school and college, but not so well understood in the elementary grades where it may be even more consistent. The background of authority is necessary, but to depend on it alone is mere coercion and builds no self-directing power. Discipline by the teacher must be transformed into a self-judging process by the children themselves or by their self-chosen leaders. This is the natural tendency. Nothing is more conspicuous in the physical training or big-muscle play of children than the rapid-fire judgments about the conduct of mates. Their judgments cover all the practical and moral issues

embodied in the game and are expressed in comments, protests, and jangling. The teacher must direct and develop the judging tendencies of children according to social standards in order to establish the capacity for self-direction. The activities should be self-judged and lead to satisfaction through self-direction and thus foster initiative in applying standards to behavior.

**4. Class discussion.** Discussions in class, team, and athletic club or association are necessary for the organization and conduct of the activities. These discussions are naturally centered on the primary issues in which the children are interested — that is, the organization of the activities. But the successful organization of the activities requires that the social situations and moral problems in their concrete form shall be taken up and solved. This is the leader's opportunity to lead on the interests and the discussions to the point of generalization. The activities in the gymnasium and on the playground give many concrete moral experiences. The responses are specific and the judgments by the teacher or associates are specific. But in the class discussion judgments concerning many particular acts may be built into a general idea. The principles evolved from concrete experience may be raised to the level of a rationalized attitude. Further, the class discussions give the opportunity to loop up the moral training in physical education with that derived from other sources.

**5. Supervision.** The last point suggests that the overlapping training in the different activities or subjects of the curriculum requires a teaching and administrative coöperation in considering the bearing of all the activities on the common problem of building

moral habits and attitudes. Especially where the activities are departmentalized in the late grades, must there be coöperation among departmental teachers on moral education. This coöperation should also be a definite administrative problem. Since moral education is an education in moral standards applied to all activities of the curriculum, it cross-cuts the supervision of all the activities and thus is not usually set up as an administrative unit for special supervision. But the supervisors and administrators of physical education (and of other activities) should be just as keen about moral training in physical-training activities as they are about the achievements in strength, skills, and organic power. This is true, especially in the physical-training activities, because moral training — one way or another — is more certainly inherent in the nature of these activities than in other activities of the curriculum, say geography or history.

## II. The Program in Manners or Courtesy

Physical education has a responsibility for training in manners and courtesy. By manners is meant the spirit and the form of *address, recognition, and consideration*, which make social intercourse easy and delightful, even a source of spiritual exchange or education and a solution of many social problems. The *forms* of social intercourse are entirely a matter of education in manners. The *spirit* is a trait of character and therefore largely a matter of character education as it expresses itself in courtesy.

Children ordinarily acquire their manners by imitation, supplemented by an incidental coaching according

to the standards of the family and its associates. Only a few children from exceptional families have large experience or a systematic training in all forms of social technique.

In school, children express manners and acquire manners (*a*) in the formal activities of the curriculum, (*b*) in the miscellaneous social relationships and communications of school life, (*c*) in the organized extra-curricular activities, and (*d*) in the formal social events such as parties and celebrations.

In all these social relationships children may build up habits and attitudes in courtesy. In the formal activities of the curriculum the teacher builds a technique of address — a simple group of habits. Seldom are the social relationships in the other activities of the school organized for teaching a social technique or for supervising the development of manners. If children are to learn good manners *they must be taught the technique of polite social intercourse in different social relationships, and have the opportunity to practice good manners.* The school's social experience *should be organized* as an expression of good manners.

Physical education, because of the nature of the activities it organizes, gives an intensive training in manners and offers an important opportunity for teaching a technique and for establishing an effective supervision of manners.

The managerial organization of physical-training activities sets up a laboratory for the expression of manners and for a discipline in manners. Of all the activities in the school curriculum, the natural physical-training activities exhibit the most extreme expression

of manners. Reference again to the analysis of games under the head of "objectives" will suggest the power of the emotions in the social relationships of the games and the tension on the forms of courtesy. The expression of manners is inherent in the nature of the activities. Manners are formed automatically. The social spirit shines out. Habits and emotional attitudes are expressed and cultivated. The responsibility of the leader cannot be avoided. These expressions in manners, of the conflicting emotions and interests, are the opportunities of the leader to teach and discipline in manners and courtesy, both in form and spirit. The interest in the activities, the time required for them and the intimate relationships of the leader with the children, make the opportunity of the leader in the teaching and the disciplining of great importance. And the experience of many workers has demonstrated on a large scale that even crude boys and girls can be trained in an attitude and a form of expression in courtesy which is encouraging. This is a laboratory procedure which should be elaborated for all teachers.

The incentives in the development of manners should be organized in connection with the organization of incentives in physical-training activities. Children enjoy and take pride in applying the spirit and forms of courtesy in their school relationships. The several forms of expression of manners can be correlated under the word *fellowship* and scored under the point system in association with achievement and morals. Fellowship in this sense becomes an ideal and a process of observance of the forms of mutual consideration.

Successful experiments have demonstrated that

in a regularly organized weekly "social hour" which is recognized by the school and the parents as *the* social event of the week, a social technique can be cultivated which is democratic, simple, and wholesome. Young people need such experience in their social contacts. The experience satisfies a craving, which, unsatisfied, sends many boys and girls astray. The big-muscle activities can be organized to be of great value in social experience and in the forms of polite society. This experience and knowledge gives young people the confidence for proper social relationships.

Finally, all the children's problems arising out of this "coaching" in manners, this organization of incentives, and teaching of a technique should be taken up in class discussion right along with the discussion of the problems in physical-training activities and morals. There should be an interpretation of the principles underlying the spirit and the forms of courtesy. The thought-out principles should make manners in social intercourse an intelligent matter and not a mere mass of mechanical conformations. The discussions give opportunity to generalize ideas from a consideration of the manifestations of courtesy, and the ideas so gained will influence behavior in the miscellaneous social contacts of the school.

## SECTION III. THE PROGRAM IN TEACHING HYGIENIC BEHAVIOR

*A*. Definitions; and factors influencing health.
*B*. Two forms of effort in promoting health.
*C*. Objectives in teaching health.
*D*. The school's difficulties in teaching health.
*E*. The function of physical education in teaching health.
    1. The activities as the developmental source of health.
    2. The activities carry the health motive.
*F*. The bases of the program.
*G*. Organization and leadership.
*H*. Methods of reinforcing ideas.
*I*. Contribution of other subjects in the curriculum.
*J*. Supervision and administration.

## SECTION III. THE PROGRAM IN TEACHING HYGIENIC BEHAVIOR

Physical education has a responsible function in the school curriculum in establishing standards in behavior according to health laws. This is the field of teaching hygiene and health habits, or "health education." It should be distinguished as an educational process, from "health supervision" as a *control* process which will be considered under the control of health conditions.

### *A.* DEFINITIONS AND FACTORS INFLUENCING HEALTH

Health is a condition of the organism. It refers to the functional condition of the organism at any stage of growth. Normal growth, year by year, is dependent on this functional condition. A disturbance of this healthy functional condition is a handicap on normal growth. The healthy condition and normal growth are determined by numerous factors or influences which may be grouped under several headings, as follows:

(1) The hereditary potentialities and growth tendencies. Removal of growth defects.

(2) Developmental activities, or play and work.
   (*a*) Amount and variety of activity.
   (*b*) Development of healthful emotional attitudes.

(3) Diet; nutrition.

(4) Sleep and rest.

(5) Avoidance of infection.

(6) Respiration, oxygenation, fresh air, sunshine.

(7) Elimination.

(8) Temperature regulation.
(9) Cleanliness.
(10) Avoidance of physical injury in play or work.
(11) Care of the motor mechanisms and sense organs.
(12) Care of the skin and nails and hair.
(13) Avoidance of stimulants and drugs.
(14) Care and regulation of the sex functions and emotions.

All the factors or influences affecting health and normal growth are not of equal importance. This may be seen by reclassifying them under the broad headings of general influences which determine the results of all growth and development, as follows:

FACTORS CONTROLLING HEALTH

(Partial statement to indicate relationship)

| Hereditary tendencies | ACTIVITY | | Environmental influences. Social customs |
|---|---|---|---|
| | Developmental activities | Survival and adjusting activities | |
| (1) Removal of growth defects | | | (1) Health supervision and clinical facilities |
| | (2) Developmental play and work<br>(*a*) Variety and amount<br>(*b*) Emotional habits | | (2) Opportunities and leadership |
| | | (3) Diet; nutrition | (3) Home conditions and customs. Activity |
| | | (4) Sleep and rest | (4) Home conditions and customs |
| | | (5) Avoidance of infection | (5) Health conditions; inspection and control |

| Hereditary tendencies | ACTIVITY | | Environmental influences. Social customs |
|---|---|---|---|
| | Developmental activities | Survival and adjusting activities | |
| | | (6) Oxygenation | (6) Residential location. Ventilation. Clothing. Time out of doors |
| | | (7) Elimination | (7) Facilities |
| | | (8) Temperature regulation | (8) Clothing; heating and ventilation |
| | | (9) Cleanliness | (9) Bathing and toilet customs, and facilities. Clothing |
| | | (10) Avoidance of physical injury | (10) Dangers and safeguards |
| | | (11) Care of motor mechanisms and sense organs | (11) Seating customs, lighting, etc. |
| | | (12) Care of skin and appendages | (12) Customs; facilities |
| | | (13) Avoidance of stimulants and drugs | (13) Adult customs; example |
| | | (14) Care and regulation of sex functions and emotions | (14) Social customs; developmental activities; leadership |

Even this very brief outline indicates (*a*) that heredity sets the potential capacities for health which education must accept; (*b*) that the environment consists in numerous physical and social conditions influencing health, and (*c*) that personal activity is the individual's source of health.

By "developmental activities" is meant play and work that develops latent powers or educates. By

"survival activities" is meant activities that are necessary for survival from day to day, like eating, sleeping, elimination, respiration, and avoidance of injury. By "adjusting activities" is meant those activities that give adjustment to social customs.

### *B.* TWO FORMS OF EFFORT IN PROMOTING HEALTH

The efforts of society, the home, and the school to promote or conserve the health of children (i.e., the efforts this side of hereditary and a positive eugenics) fall under two classes.

First, there is the *control* of health influences or conditions exercised by boards of health, the home, and the school in the attempt to prevent contagious diseases, to remove growth defects, and to provide a hygienic environment.

Second, there is the *leadership* of children in their own personal activities to the end that these activities shall be carried on hygienically.

These two classes of efforts are related in the functions of the parent or the teacher, but the objectives of each class of effort in dealing with children are quite distinct. One is an effort to control conditions influencing children irrespective of the children's interest or motives. The other is an effort to teach the children how to behave in accordance with health laws. The technique of the adult in each is different. Hence, the procedures in the two efforts are given in separate programs. The program in the *control of growth conditions* is given in the next section; the teaching is given in this section.

### *C.* OBJECTIVES IN TEACHING HEALTH

The objectives in teaching health are to establish the capacity in children for self-direction according to the laws of health. To establish the capacity for independent self-direction is a very slow process. Children at first are totally dependent on the parent for care and for the direction of their behavior. Gradually they learn, under leadership, to direct their own behavior. The capacity for self-direction is not fully established until late adolescence, if then; and there is always a dependence, even of adults, on the control of public health by public-health officials.

Health, in so far as any individual can determine his own health, is due to his personal behavior according to the laws of health. Hygiene sets up laws, principles, or *ways* of behaving in each of the activities outlined under the classification of factors given at the beginning of this section. The activities are the ordinary activities of everyday life, i.e., work and play and the survival activities of eating, sleeping, and avoidance of infection. Hygienic behavior is the standardization of these activities. There are no new types of activities to be learned apart from the developmental and survival activities. These ordinary activities of life are *standardized* in hygiene. The *standards* determine the hygienic quality of the activities of everyday life. Health is not a product of some mysterious way of behaving. Health depends on behaving according to hygienic standards.

To establish the capacity for self-direction according to the standards of hygiene the teacher must build habits, ideas, and attitudes in each of the ways of

acting listed above. Learning hygienic behavior is acquiring standardized habits and attitudes toward each of the activity factors controlling health.

Thus *the objectives of health teaching are personal self-direction in the activities of life according to the facts and laws* of hygiene. The *process* consists in building a series of habits and attitudes. Health teaching is concerned exclusively with developing health standards in personal behavior; i.e., with developing the quality of the habits, ideas, and attitudes controlling health.

### *D.* THE SCHOOL'S DIFFICULTIES IN TEACHING HEALTH

The difficulties in teaching health are two.

First, many of the most important activities which determine health are not under the control of the school. They are controlled by the home. This is especially true of eating, sleeping, and bathing. Therefore, *the influence of the school in teaching* health must carry over to out-of-school behavior. This might be said about other studies; it is true in a peculiar sense in the teaching of health habits. It complicates the school problem in health teaching.

Second, children are not directly interested in adult-hygienic standards. They are interested in the direct satisfactions of such activities as eating. They must learn that there are standard ways of behaving.

Hence, on account of these two difficulties, the *school methods* in building health habits and attitudes must arouse incentives which will control behavior in out-of-school activities.

### *E.* THE FUNCTION OF PHYSICAL EDUCATION IN TEACHING HEALTH

Several of the activities or subjects of study of the school curriculum have important values in the total school effort to establish the capacity for self-direction according to the laws of health. Especially must biology and, later, home economics, civics, and hygiene as sciences be emphasized. Physical education, however, has two unique values, inherent in the nature of the activities, which make it of central importance.

1. **The developmental source of health.** The *first* of these values lies in the development resulting from physical-training activities. Big-muscle activities are a developmental *source of health.* Any educational process which develops a latent capacity and establishes wholesome interests has a developmental health value.

But physical-training or big-muscle activities have special values as a *source* of *health* which are not to be found in any other activity. These values were analyzed in the section on objectives in the paragraphs on the development of the instincts and emotions; nervous development; and organic development. In the matter on social adjustment, also, it was shown that the big-muscle activities are not learned because they are carried over into later life, but because they are among the most spontaneous and instinctively driven activities in child life, and so command enormous amounts of time. They are pure developers of latent powers. As developers of fundamental powers they are the primary developmental source of health.

This developmental source of health as one of the factors needs to be contrasted with the other factors

controlling health this side of heredity. It is *the one constructive factor*. Food, for example, is an essential for existence; but eating the best food develops no skill or talent. Correcting eye defects and removing adenoids eliminate handicaps on normal growth, but the correction and the removal develop no latent capacity. The developmental activities alone "draw out" latent resources in the growing organism. All the other factors are, in contrast, merely *favorable* or *unfavorable* to health. Further, the *developmental source of health* must be given a conspicuous place in the organization of health efforts in the school. Only three other factors this side of heredity in the list of factors controlling health enumerated above approach it in importance; viz., nutrition, sleep, and avoidance of infection. Development requires special and costly space and equipment and a large allotment of time. It is realized only by making the program in big-muscle activities effective.

**2. The activities carry the health motive.** The *second* important point about teaching health habits in connection with physical-training activities is that the activities naturally carry the health motive and are a natural correlating center of health interests. These facts are illuminated by the following points:

(*a*) Children are intensely interested in the activities.

(*b*) The time devoted to the activities is great. The interest in the activities and the natural need for the activities bulk large. The time which should be devoted to them during the elementary school age is between four and five hours a day.

(*c*) The activities continue from infancy to maturity. They are constant in influence during the year and through the succession of years. They must be organized in the school each year, unlike other activities of the curriculum.

(*d*) The activities carry a consciousness of the physical self with which the health motive is easily associated. The activities arise primarily out of self-testing impulses and continue in social comparison in achievement. They tend to stimulate an interest in physical prowess, skill, and welfare.

(*e*) The leadership in the activities is extremely intimate and fosters a bond of sympathy between the leader and the children.

(*f*) The activities *reveal* physical characteristics and needs to the teacher. These signs of condition serve as guides to the teacher in directing the "training" process.

(*g*) The procedure in the organization of the children in the activities requires a physical examination, and tests of achievement and regular weighing for guidance in training. These attentions foster an interest in personal physical conditions.

### *F.* THE BASES OF THE PROGRAM

The several characteristics just enumerated *are inherent in the nature of the big-muscle activities.* They give a natural school method for building health habits and self-impelling attitudes in observing health laws. This natural method, after nine or ten years of age, is based on the fact that children are spontaneously interested in their big-muscle achievements, and *that there is*

*a direct relationship between achievement and physical condition.* Achievement in big-muscle activities is dependent on physical condition, just as success in life is dependent on condition or health. It is easy to show a boy that he cannot do his best in his efforts to achieve unless he "trains" or "conditions" himself. This requires wholesome living. Condition is determined by obedience to the laws of health. This is "training." The coach, in a crude way, has always required this observance. But he has required it not for health, but to win. His procedure must be made educationally sound, be applied to all children, and be made self-impelling.

Children in their physical education must be considered "in training." Their interest in achievement and associated condition under proper leadership goes on from satisfaction to satisfaction until it becomes a powerful force in behavior. To see that this development of interest takes place is the most important function in teaching health. Thus the teacher is able to see that good physical condition is acquired through a self-impelled observance of the laws of health. It is a simple matter gradually to expand this ideal that has to do with the maintenance of condition for athletic achievement into an ideal of maintaining condition for all the functions of life. Health, then, gains a meaning for life. Every fact of personal hygiene, physiology, and anatomy, by this method, may be looped up naturally to the child's spontaneous interest in his achievement. His own problem in maintaining condition for achievement motivates his health activities. The method and the material tend to lead on to

his own self-direction. Physical education thus has a *natural* means of establishing health habits and attitudes.

The "training" idea or ideal is not so specific in its control of conduct for achievement among little children, or as we go down the scale of ages below nine. In a broader and simpler sense, however, the influences are just as potent. Even the kindergarten children are profoundly interested in themselves and in being "big" and "strong." Concrete evidence of "condition" or of what is "good for me" or "bad for me," as revealed by weight or tests or activities, has a strong influence on independently controlled behavior. Little children, also, are inclined to have an unquestioning faith in the teacher. It is easy to form the association between the idea of "condition" and what is "good" or "bad" in health habits.

It will be seen from this analysis that while children have no direct interest in the laws of health as systematized by hygiene, they have a thoroughgoing interest in two essentials for a self-driven acquisition of health habits and attitudes. First, they have a keen interest in all activities in which they gain satisfaction and in achievement in these activities. It is the first function of a natural educational method to lead on this interest from spontaneous forms to established forms as a basis for progress in education. It is the first function of physical education, from the standpoint of health, to develop the interest in big-muscle activities as a basis for a self-driven interest in achievement. Second, children have an intense interest in themselves, their own characteristics and abilities,

and in any controllable influences which are favorable or unfavorable to these traits. It is the business of education to lead on the development of such of these egoistic interests as are valuable for establishing virtues necessary for good citizenship. It is the business of physical education, from the standpoint of health, to lead on the development of such of these interests as are *the basis for a self-directing interest in personal physical condition for achievement and later for the functions of life.*

This "conditioning" ideal is the controlling influence in the adult's keep-fit program as well as the child's. The adult, in so far as he becomes conscious of his health ideals at all, controls his behavior according to health laws because he wishes to succeed in his work, realize some ambition, or merely enjoy life with absence of the annoyance of pain or discomfort.

Thus the ideal of "training," "conditioning" the self, or "keeping fit," is effective from early childhood right on through adult life. *It is the fundamental life motive with regard to health. It is at the basis of effective school methods of teaching health, because it establishes self-directing incentives in the control of health habits which carry over from the school activities to out-of-school behavior where the most important health habits are exercised.*

### *G.* ORGANIZATION AND LEADERSHIP

*a.* To be effective, the self-conditioning method must be based on the selection and organization of the big-muscle activities. The activities must be selected and organized from the standpoint of *opportunities* for "training." Formalized activities arouse no incentives

to "train." The activities which are competitive or which give the sense of achievement and hold the imagination for considerable spans of time naturally tend to enlist the self-driving impulse to condition the self for achievement. Therefore the organization of the activities in the physical-training program should emphasize, from the standpoint of health, as well as from that of morals, manners, and organic and nervous development, the *opportunities* for a full sway of the achieving and competitive impulses.

A closely related opportunity is the organization of the children to control the hygienic influences of the school. The children should be organized in the health-control process of the school so that they will themselves take the detailed responsibility for such matters as the regulation of ventilation, temperature, and humidity, and keeping the premises clean. This organization emphasizes social or community responsibility in health. It furnishes laboratory practice in the control of community hygiene. It is part of the conditioning process in its social aspects.

*b.* In the practical leadership of big-muscle activities and of school sanitation there should be constant cultivation of the essential mental connections in developing the training ideal. As suggested above, there is no instinctive response to health laws. The mental connection between hygienic laws or habits and physical condition and the relation of these to achievement must be learned. The idea of "training" for condition by a self-impelled obedience to health laws must be associated with an idea of the *significance* of condition for achievement or enjoyment. The idea of the control of

sanitary conditions, also, must be associated with the idea of the *influence* of the sanitary environment upon the community welfare. These ideas should be "coached" in the daily routine of the activities just as morals and manners are coached. For example, the pupil's success or failure in achievement, the scoring of achievement, the morning inspection of health conditions, the regular weighing for classification, and the physical examination are all routine procedures which *should reveal "condition"* of the organism and influences affecting it, *and arouse an inquiring attitude as to causes* in terms of health-habits. The training idea should be conspicuous in the pupil's daily thinking about the activities, and it should be developed *as a habit of judgment* about personal and health situations.

The results of the conditioning process should also be scored in the point system along with the scoring of achievement, sportsmanship, and fellowship. As *condition* is determined by a number of health habits which can be listed and arranged in a scale, it is a simple matter to score in points the observance of the habits. "Training" thus becomes visualized, and the scoring may be organized for competition against one's own best record or against the records of others. The scoring also gives the means of comparing the effectiveness of training on achievement in activities, or on daily enjoyment. It is visualized as an ideal and as a process of behavior requiring self-control.

*c. Class discussions* should be organized to interpret the problems arising in the practical training process and to expand the pupil's thinking into a broader acquisition of hygienic ideas and attitudes.

The primary subject matter for these discussions should be the problems concerning the conditioning process which arise right in the daily activities, including the pupil's participation in the control of the school's hygienic environment. This connects ideas with action. The condition of each pupil may differ from day to day. There is a cause. Incidents occur in the daily activities of the school and in the experience or behavior of different pupils, that have a health significance. Further, children will ask questions about their activities and about their bodily functions, if given a chance and properly led, which strike down to the roots of personal physical problems. These problems require a physiological and hygienic explanation, and pupils will solve them if properly led in class discussion. The incidents and questions are the *basis* for leading on the thinking about health problems to the point of generalized ideas and attitudes. As the incidents and experiences differ from day to day, they give the opportunity for the large amount of repetition necessary to build general ideas.

### *H.* METHODS OF REINFORCING IDEAS

A number of special methods or devices are of value, especially in the early grades, in interpreting and reinforcing the ideas and habits that are being developed in the conditioning process. The methods or devices are dramatization, rhymes, picture materials, stories, and special health days or events. These methods build ideas about habits — not the habits themselves. They are of value in proportion as they reinforce the action tendencies developed in the practice of health habits

each day. The ideas of themselves have no health value except as they influence behavior and promote self-control.

### *I.* CONTRIBUTION OF OTHER SUBJECTS OF CURRICULUM

A broader building of ideas and attitudes should be attained through many other subjects of the school curriculum. In the early grades, health material is being injected into the reading, composition, and arithmetic. Nature study, geography, and history make their contributions. In the more advanced grades, the contributions of biology, civics, and home economics are especially important. In these latter subjects a broader range of information about the social significance of health must be developed. The information acquired in these subjects is of value for health in proportion as it is looped up with the personal incentives to act. Ideals and attitudes should be expanded for social action. Thus all the activities of the school which touch at all upon health should contribute to the expansion of the ideals and attitudes about the conditioning process and sanitary control. This requires, in the late grades where activities are departmentally organized, a coöperation between departmental teachers.

### *J.* SUPERVISION AND ADMINISTRATION

In most elementary schools the classroom teacher will be required to conduct the program in teaching health. The range of habit building which the teacher can undertake will depend upon the teacher's training and the expert supervision supplied. The supervisor

must supply the teacher with three forms of help. First, a syllabus should be supplied giving a detailed exposition of the procedure in teaching health habits. Second, the supervisor must show the teacher how to use the syllabus in the daily teaching. Third, the supervisor must supervise the conditioning process, the participation of children in the control of school sanitation (a teaching process), the use of devices to reinforce health ideas, and the method of correlating the contribution of other subjects with the ideas and habits being developed in the physical-training process.

Frequently it is suggested that there should be an overhead administrative officer for health. This would mean, if the suggestion is logical or reasonable, that a special administrative officer, in addition to the superintendent of schools or his general assistants, would supervise all the supervisors and all the teachers in all the activities or subjects which make a contribution to health (practically all subjects) *from the standpoint of the one standard of health alone.* The same argument might be made for morals or manners or æsthetics or truth. A little thought will reveal the fallacy of such a suggestion. *Standards in health,* just like standards in morals or manners or truth, *will be built in the teaching process,* not by making them a separate responsibility apart from the teaching of all activities, but *by making them a part of the conscious and conscientious objectives of every teacher in teaching every phase of every activity or subject in the curriculum.* The process that works consists in saturating all the school procedures with a teaching conscience about health.

## SECTION IV. THE PROGRAM IN THE CONTROL OF HEALTH CONDITIONS OR HEALTH HANDICAPS

*A*. Definition.
*B*. Rise of the program.
*C*. The elements in a complete organization.
*D*. The degree of organization.
*E*. The essential procedure and personnel.
*F*. Functions of special health experts.
*G*. The administrative organization of health control.

## SECTION IV. THE PROGRAM IN THE CONTROL OF HEALTH CONDITIONS OR HEALTH HANDICAPS

The school has been forced to organize a program for the control of health conditions, and especially for the control of growth handicaps. This control is frequently called "health supervision" or "health service." But these terms are sometimes confusing because they are used with various meanings.

### *A.* DEFINITION

By the *control of health conditions* is meant the efforts to *protect* children from contagious diseases or an insanitary environment, or from defects in their own growing organisms, or from any influence which handicaps normal growth or development and thus impedes the best educational progress. It is called the *control* of health conditions because it is a control process, or a prevention or correction of handicapping influences, *and quite distinct in technique and purpose from the educational process as embodied in the activities of the curriculum.* The latter process is to teach children to control themselves.

### *B.* RISE OF THE PROGRAM

This health protection is another phase of the function of the home which is being supplemented or taken over in part by the school. Parents, in proportion to their intelligence, watch over the physical welfare of their children. In case of illness or the discovery of some defect, a physician is consulted. If the illness is

contagious, the board of health exercises its quarantine power. But this home care is not general or systematic enough to insure children against defects that might handicap their growth and normal school progress. Hence the school is being compelled to take over the responsibility of seeing that handicaps are removed.

The program in the control of health conditions, like the school curriculum, has had an evolution. The first step in its organization was an extension to the schools of the functions of the board of health in controlling contagious diseases. Next, the effects of school life on children gave rise to the school hygiene of heating, lighting, ventilation, and cleanliness. The movement then passed on to the detection and removal of handicaps such as defects of the teeth, eyes, ears, nose, throat, glands, and nutrition. The demand now is to make these controls effective. The money cost of retardation through sickness and defects, and the results of these in later life, are forcing the issue. The school and society in self-defense must see that all remedial physical handicaps on educational progress are removed.

### *C.* THE ELEMENTS IN A COMPLETE ORGANIZATION

The elements in a complete control of health, from the school standpoint, may be indicated by the following outline.

1. *Health Conditions to be Controlled*[1]
   - *a.* Contagious diseases.
   - *b.* Physical defects of eyes, ears, nose, throat, and glands; nutrition.
   - *c.* The school environment: Such as ventilation, lighting, heating, and cleanliness.
   - *d.* Home and community conditions that influence the pupil's health.
2. *School Procedure in the Control of Health Conditions.*
   - *a.* Health inspection:
     - (*1*) Of the pupil—
       - (*a*) By daily inspection and continuous observation for the signs or symptoms of contagious diseases.
       - (*b*) By a periodic physical examination for growth defects.
     - (*2*) Of the environment—
       - (*a*) By the inspection of the school hygienic environment.
       - (*b*) By inspection of the home and community conditions.
   - *b.* Recommendations and "follow-up" procedure in dealing with school administrators, the home and boards of health.
   - *c.* Social service; i.e., hot lunches, nutrition classes, etc.
   - *d.* Clinical service; i.e., dental and other clinics.

It will be noted from this outline that there are definite *health conditions* to be controlled, and that there

[1] The hygiene of school activities or the "hygiene of instruction," although this really belongs to hygiene as applied to the curriculum, is sometimes included.

are certain recognized *school procedures* for the control of the conditions. The *health control procedure* presents the problem in the organization of the school program.

### *D.* THE DEGREE OF ORGANIZATION

The *degree of organization* of the school procedure in health control may range from nothing more than sending children home when they are obviously ill to providing a very elaborate organization with a costly supervising staff and with clinics manned by experts. The organization possible in any school or community depends on the population and local school finances. Therefore, *a distinction must be made between the essential school procedures in health protection and the more elaborate organization for increased skill and service.*

A program proposed for the control of health conditions in the public schools generally, must give *all the essential procedures for the conservation of children's health; yet it must be susceptible of operation anywhere.* It must of necessity *work* for the seven million children in the one- and two-room schools of the country, as well as for the children in the highly organized city schools. The essential procedures must work anywhere; they must be so fundamental as to be susceptible of elaboration to any degree of organization desired by any community.

### *E.* THE ESSENTIAL PROCEDURES AND PERSONNEL

**The essential procedures in health control are** (*1*) the continuous and daily inspection or observation of children for signs of contagious diseases or growth defects; (*2*) exclusion, in case of signs of contagious

diseases — with reference to the home and to health authorities where possible — and refusing admission before the disappearance of the signs or the presentation of a physician's certificate; (*3*) reference to parents, in case of signs of defects, with recommendations or form instructions on what to do, with a form "follow-up"; (*4*) the inspection of the school environment, followed by adjustments or a recommendation about remedial conditions to school administrators. This procedure may include also a simple social service, as the supervision of lunches.

The *essential officer* in the control of the essential procedures is the elementary teacher. It is customary, in the more elaborate organizations of health protection, to employ nurses and doctors, but these officers should not perform the essential functions of the teacher. The necessity of requiring the teacher to stand as the central officer in the control of health conditions may be considered from four standpoints.

*1. The teacher, considered from any standpoint, is the essential officer in the school system.* No other officer can take the teacher's place. There can be no teaching without the teacher. Even the superintendent exists to make the teacher's work possible. A nurse cannot be substituted for the teacher.

*2. The teacher must know the children taught.* This requires constant study of the children; and this study must cover health and growth conditions as well as intellectual activities, or the teacher will make bad mistakes. Hence, for proper teaching, the teacher must be trained to observe and be required to inspect health conditions. The essential procedures are very simple,

and the teacher can in a short time be trained to perform them.

*3. The control of growth conditions is a daily function requiring constant observation.* The teacher is the only person conceivable in the school system who can be in constant contact with the children and make constant observations. The teacher is on the firing line all the time. In most rural schools, unless the teacher is responsible, there will be no health control. A district nurse, even if one exists, can make the rounds of schools occasionally only. And in city school systems, where the organization provides a staff of nurses and doctors, it has been found that the teacher is the most effective officer in the control procedure as an intermediary in inspection between the children and the experts, before there is reference to the home or the clinic. A nurse cannot be in attendance all the time, and to have either a nurse or a doctor perform the duties that a teacher should perform as a matter of routine, is too costly to be considered. The teacher neither trained to control health nor expected to do so stands for inefficiency and economic waste in the school health control.

*4. The teacher's responsibility in health protection is essential to the inculcation of health habits.* The *control* of health conditions is not an educational process; it is a school care and protection of the children; yet the incidents or situations which arise in the control of health give one of the effective opportunities for teaching health habits. This teaching is not a function that should be performed by a nurse or a doctor. The nurse and the doctor are not teachers. The method of

teaching will be effective only as the teacher is trained and is expected to observe health conditions.

Where the school and the teaching are departmentally organized, the essential health-control functions of the teacher still hold, but they also become somewhat departmentalized. One departmental teacher has a special and peculiar relationship to health control. This is the departmental teacher or director in physical education. This teacher, *as a teacher*, has a special responsibility in the control of health or growth conditions, because of the nature of the activities organized. These activities bring this teacher more than any other into intimate contact with the pupil and reveal physical condition to the teacher in a way that it is not revealed to the doctor or the nurse. The contacts are daily and for long periods, not only in the exercise places, but in the locker rooms, dressing rooms, and consultation rooms. The activities require an examination to determine fitness for participation in the different events and games, or for special needs. They require a constant weighing of pupils as a guide in "training," and just as constant testing of achievement. All these facts make the responsibility of the departmental teacher in physical education for the control of health conditions so intimate that it cannot be avoided. Efficiency requires the fulfillment of these more specialized responsibilities which the grade teacher performs. Any organization that deprives the *teacher* [1] of the control responsibilities takes away

[1] Where administrative officials appoint mere athletes, or, worse, mere gymnasts, as departmental directors or supervisors, these persons of course cannot perform the functions described and inefficiency must be the result.

fundamental elements for efficiency in teaching and reduces the effectiveness of the school health control.

It should be noted that the functions and responsibilities referred to here are essentially those of the teacher, and that they remain those of the teacher no matter what the overhead administrative organization of health control may be.

### *F.* FUNCTIONS OF SPECIAL HEALTH EXPERTS

Any *degree* of organization in health control above the essential procedures and functions is for the purpose (1) of making the essential procedures more effective, or (2) of adding a service that the teacher cannot give alone.

1. The experts (doctors or school nurses) can add effectiveness to the essential procedure in three ways.

*a.* They can train the teacher to make inspections and see that the teacher systematically conducts the inspections.

*b.* They can stand as intermediate reference officials for more expert judgment on doubtful cases before recommendations are made to parents or guardians. From the standpoint of school economy, in this connection, it must be remembered that in the essential procedures as usually organized the most expert doctor or nurse simply makes a judgment and refers the case to the home or to the health authorities. There is no detailed diagnosis or treatment. Nothing is added to the essential service which children receive except the expert judgment.

(*c*) They can give a more effective follow-up by visiting the home. The teacher is tied to the classroom

during school hours. This visitation gives the means of carrying instruction into the home (a function of the school which is becoming well recognized), and of organizing, in cases of contagious diseases, effective methods of exclusion, quarantine, and readmission.

Experts can add a skilled social service and clinical service. They can add a social service which is beyond the training of the teachers. They can add a clinical diagnosis and treatment to the essential procedure in inspection, recommendation, and follow-up. The degree of this higher organization of social service and clinical service determines the expert staff required.

### *G.* THE ADMINISTRATIVE ORGANIZATION OF HEALTH CONTROL

In large school systems an administrative officer is usually placed in charge of the health-control functions of the school and the health-control duties of teachers and expert assistants. The administrative organization for the control of health, apart from other school functions, is complicated only by its relationships with the functions of the board of health.

An administrative organization of health control may be under the jurisdiction of the board of health or of the board of education. In either case there must be a recognition of the functions of each board. The school board is in charge of the schools and responsible for the welfare of the children in the school. The health board is responsible for public health. The drift of opinion favors an organization of health control under the school authorities. Efficiency in the

341
H57
C.2



general-health care of children demands the latter organization. Yet there must be a clear recognition of the fact that the police power for the control of contagious diseases resides in the board of health and that therefore school officials must work through a cooperative agreement with the board of health, or at least obey all the regulations of the board of health in questions of elimination, quarantine, and readmission. They may meet the requirements of the situation by strict exclusion of all cases of contagious diseases or suspected cases and reference of them to the public-health officials, or by having the expert in the school organization deputized as an official of the board of health. However, inspection and examination for defects, and recommendations to the home, the follow-up, and the social and clinical service concerning defects, bulk much larger in significance for child welfare than do measures against infection. These broader functions that have such a deep influence on education should be under the administration of school officials who think about the needs of the children from the school standpoint.

3 0273 00400456 7

GV
341
H57
c.2

GV
341
H57
c.2

116296

Date Due

| | | | |
|---|---|---|---|
| JAN 12 '79 | DEC 2 '76 | MAY 18 '84 | MAR 06 2007 |
| | | OCT 2 | MAR 25 2011 |
| APR 5 '78 | APR 6 '78 | NOV 24 '84 | MAR 24 2011 |
| | OCT 3 '78 | | |
| JAN 19 '79 | NOV 6 '80 | MAR 10 '86 | |
| | APR 16 '81 | | |
| MAR 8 '82 | MAY 15 '87 | APR 17 '95 | |
| MAY 15 '82 | APR 9 '83 | NOV 08 '01 | |
| | NOV 9 '83 | APR 04 2007 | |
| | DEC 19 '83 | DEC 12 2007 | |

DISCARD

MEMORIAL LIBRARY
STATE UNIVERSITY COLLEGE
Cortland, New York

PRINTED IN U.S.A.

MAY 71
N. MANCHESTER, INDIANA

JUL 78 ENT